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ABSTRACT

Focusing on the theme of nonformal education as a method of involving rural people in developmental processes designated to help improve social and economic well-being, this report on the second international conference/workshop on nonformal education presents major concepts and methods involved in development work with the rural poor via case descriptions of projects in the fields of agriculture, family planning, health delivery systems, trades training, and other fields related to rural welfare. Specifically, this book includes: conference and workshop design; key operational generalizations and issues in the use of nonformal education; policies and programs as viewed by World Bank and Agency for International Development; nonformal education in rural development projects (the Comilla, Bangladesh project; a review of extension principles; ARDU, an Ethiopian Rural Development Unit; the Mexican "Plan Puebla"); nonformal education in nutrition, health delivery, and family planning in India, Colombia, and Korea; nonformal education in rural development in Ecuador, Guatemala, and Botswana; panel discussions on using media systematically in nonformal education and improving the performance of nonformal educators; an address on literacy education in development; a workshop on nonformal education and the rural poor; and six resumes or excerpts of articles on nonformal education. The appendices include an abbreviated program, a participant list, a list of materials exhibited, and data on the principal conference resource persons. (JC)

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Michigan State University

2 PROGRAM OF STUDIES IN NON-FORMAL EDUCATION

REPORT OF CONFERENCE AND WORKSHOP ON

NON-FORMAL EDUCATION AND THE RURAL POOR

Richard O. Niehoff
Editor and Conference Director

Kenneth L. Neff
Associate Director, Workshop

Under the Joint Sponsorship of
Michigan State University and
The Agency for International Development

Program of Studies in Non-Formal Education
Institute for International Studies
COLLEGE OF EDUCATION
MICHIGAN STATE UNIVERSITY
1977

Conference and Workshop

held at
The Kellogg Center for Continuing Education
Michigan State University

September 26-29, 1976—Conference
September 29-October 2, 1976—Workshop

". . . In a world of plenty, 'education' may connote literacy and wide learning—truth for its own sake as well as a means of progress.

In a world of want, education must . . . be something far more restrictive and practical—as a means of improving living standards rather than an end in itself . . .

Education should help equip LDC citizens to cope with their most pressing problems—hunger, ill health and a lack of more productive employment . . ."

(From "Implementation of New Directions in Development Assistance," Report of The Agency for International Development, July 1975.)

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FOREWORD

This is a report on the second international conference and workshop on nonformal education held on the campus of Michigan State University. The conference and workshop focused on the theme of nonformal education as a method of involving rural people in developmental processes designed to help them improve their economic and social well-being. Major concepts and methods involved in effective development work with the rural poor were illustrated from case descriptions of projects in the fields of agriculture, family planning, health delivery systems, trades training, and other fields related to rural welfare.

The deliberations of the conference revealed much about the character of nonformal education. Properly designed and managed, it can reach remote populations not served by formal schools. It can educate the dropout. It deals directly with problems of basic subsistence, such as food production, nutrition and health. And it deals with these problems now, on their own terms, rather than within a set of educational prerequisites. Nonformal education is not a *pre*requisite. It is a requisite.

Nonformal education is sometimes called the silent educational "system." It does not require elaborate campuses and buildings. Its "curricula" will not often be found spelled out in catalogues or brochures. Yet nonformal education occurs almost everywhere—in fields, factories, offices, cooperatives, associations—wherever development programs are underway. Participants in these programs rarely identify themselves as "students." Furthermore, teaching is done by those who do not normally think of themselves as "teachers"—professionals and paraprofessionals from ministries of agriculture, public health and other development fields, as well as from formal educational organizations.

Where there is concern with basic human problems, good nonformal education will be found. This conference found that concern in actual projects serving the rural poor. Carefully selected to represent a range of approaches, clients, and conditions, the cases reported in the conference, mostly by practitioners deeply immersed in them, illustrate where the critical action is in nonformal education. It is where the poor struggle to survive.

The conference and workshop were conducted under the experienced direction of Richard O. Niehoff, with the able assistance of Kenneth L. Neff. I express now my deep appreciation to Professor Niehoff for bringing to the preparation of this report the same vigor and insight that he applied to planning and directing the conference itself. As a result, those who attended the conference will have a record of its best. And those who did not attend will have available a rich sourcebook on the application of nonformal education to the problems of poverty and rural development.

I am, therefore, pleased to commend this report to all who labor to improve the quality of life among the rural poor and who seek to add a measure of human dignity to those so often denied it.

Cole S. Brembeck
Director, Institute for International
Studies in Education
Michigan State University
March 1977

PREFACE AND ACKNOWLEDGMENTS

Much of what might appropriately be written in a preface of a report on the conference and workshop is more extensively treated in Chapter 1 on "Background for the Design of the Conference." This leaves only the acknowledgment of the helpful participation of many—without whose counsel, energy and hard work, an international conference and workshop of the complexity and magnitude of the one held could not have been convened. Anyone who has had a comparable experience will know exactly what I mean; others who have not may be advised to approach such a task with appropriate caution and with the suggestion that they gather together an equal array of talent and dedication.

My gratitude is, accordingly, expressed to all resource persons whose contributions are acknowledged elsewhere; to World Education, International Planned Parenthood Association, Agriculture Development Council, International Development Research Centre, the International Council for Educational Development and other organizations for making materials available to us, and to all collaborators, colleagues and participants with special thanks to:

Collaborators in the Agency for International Development

James Chandler, for his wise counsel in helping to plan the conference and workshop; for his active participation throughout the conference, and for his thoughtful reading of, and comments on, the draft report.

Robert Van Duyn, for his collegial counsel and indefatigable coordination of the myriad details related to AID's backing and participation in the conference and workshop.

James Hoxeng, Myron Vent and Bernard Wilder, for their encouragement, counsel and participation in the conference and workshop.

Michigan State University Colleagues

Cole Brembeck, for giving me the opportunity to do what I had long wanted to do, namely, to delve more deeply into the many facets of nonformal education and to combine long-standing interests in development and education, and for his helpful participation, generosity, advice and counsel before, during and after the conference and workshop.

Kenneth Neff, for his helpful participation in planning the conference, for his work as co-chairman of the workshop, and for other contributions recognized elsewhere in this report.

David K. Heenan, for his participation in planning the conference and for his ever helpful assistance in performing numerous administrative tasks.

James Page and Manfred Thullen, for serving on the advisory committee to plan the conference and for organizing and conducting two panels which made important contributions to the conference.

Joan Claffey and her associate Mary K. Hobbs, for helping plan the conference and for the massive task of assembling, displaying and helping conferees utilize the many useful items in the exhibit of nonformal educational materials.

Marc Van Wormer, for the many scheduled and unscheduled, anticipated and unanticipated events and duties associated with his work as Coordinator of the program with the Kellogg Center for Continuing Education.

Lawrence Boger, Keith Goldhammer and Homer Higbee, for their warm words of welcome to get the conference well launched.

Robert H. Davis, Russell Kleis, Kathryn M. Kolasa, Robert C. Morris, Linda J. Nelson and Ted Ward, for ably chairing various meetings and discussion groups.

Stephen T. Hoke, who assiduously ferreted out possible articles for duplication and who also acted as a recorder.

Kathleen Graham, who unobtrusively acted as ombudsperson for the conference and quietly called problems to the attention of the director, and who also acted as a recorder.

Maria Beatrize Luce, James Shute, and Michael J. Vavrus, who performed effectively as recorders.

Ester Schwedel, who helped bridge the gap between Spanish and English for those who needed a bit of help.

Richard Crespo, who became an expert in airline arrivals and departures as he greeted many speakers and conferees.

Catherine Burt and Ruth Hefflebower and associates, for their indispensable help and patience in keeping all manner of papers associated with getting the conference underway smoothly, and to Catherine and associates for their nimble fingers and active minds in getting the manuscript ready.

Marjorie Overhouse, editor, MSU's Information Services, whose professional eye and patient counsel was much needed to make this report much more readable than it would otherwise have been.

Barbara Brown, artist, MSU's Information Services, for the cover design.

But in behalf of all of the above, the conventional disclaimer of any responsibility for errors of fact or interpretation, which rest squarely on the shoulders of the Conference Chairman and Editor of these proceedings.

The Old Agricultural Lag*

by Kenneth Boulding

I

O why does agriculture lag?
The answers all are in the bag
But the bag in which the answer lies
Turns out to have enormous size.

II

The ardent fertilizer buff
Thinks fertilizer is enough
(Such buffs, it's interesting to know
Are much produced in Buffalo).

III

Then some there are who argue that
The major culprit is the rat,
And so encourage, far and wide,
The massive use of pesticide.

IV

Economists, it's plain to see
All think that *Prices* are the key
For no economy will grow
With inputs high and outputs low.

V

Markets and competition now
Must be the hand that speeds the plow
Making, in one Rostovian leap
Corn dear, and fertilizer cheap.

VI

Some think the answer lies in Risk
Others, that land reform's the whisk
To brush away the blocks that bar
Development's inmobile car.

VII

Some say, when growth occurs, what fed it
Is careful grants of shaky credit,
With Government to underwrite
The debts of those who fly by night.

VIII

For Anthropologists, Tradition
Remains the major inhibition.
And peasants, oftener than we think,
When led to water, do not drink.

IX

With facts too many now to list 'em
The answer is a General System.
So what has got to be advised,
Is, "get the stuff computerized."

X

When scientists use common sense
They fall into mistakes immense.
It's better far to place reliance
Even on the softest social science.

XI

Hard work and saving à la Mill,
Is seen as far too bitter a pill
So comes the unimplemented plan –
What Mill cant, maybe Millikan.

---

*From *No Easy Harvest.* Permission granted to reproduce by Massachusetts Institute of Technology.

Chapter 1

Background for the Design of the Conference and Workshop

General Background Considerations

For many years thoughtful students and practitioners of economic and social development and technical assistance programs in third world countries have been somewhat confused, if not baffled, as to what policies might be formulated and programs developed which would make substantial improvements in the productivity and well-being of the rural poor. For example, a conference was held at the Massachusetts Institute of Technology in 1965 on *only one* aspect of the complex of problems associated with rural development and the rural poor—namely, how to increase agricultural productivity in developing countries. The conference was attended by very knowledgeable scholars and practitioners of agriculture and related subjects from the United States and abroad, who presumably understood the complexity of the problem. The task for the conference was to prepare recommendations for a hypothetical, newly appointed Minister of Agriculture in a developing country on how he could get on with his job. The conferees discovered that their assignment was much more difficult than they first thought it to be. They finally expressed their findings in a small but informative and provocative volume under the title of *No Easy Harvest.*[1] A "poetic" summary of the conference is on the facing page.

Another evaluation of the immense difficulty of dealing effectively with rural development problems was expressed by an outstanding student of development and of nonformal education, the late Frederick H. Harbison, as follows:

> . . . The organization of an integrated rural development effort, however, is the most complex and critical task of all, and the range of effort is vast. In agriculture it requires encouragement of and assistance to small

---

[1] Max Millikan and David Hapgood, *No Easy Harvest*, Boston: Little, Brown and Company, 1967.

> freeholders in producing cash crops; it calls for tangible improvement in subsistence food production for many outside the money economy; in many countries it will necessitate sweeping land reform, as well as imaginative programs to motivate peasants numbed for decades by despair and stagnation. The sheer physical task of reaching the masses rather than the few who are better off and more receptive to innovation is an undertaking of staggering proportions. And beyond the task of organization of the production of food are the equally baffling problems of organizing distribution, marketing, credit, transportation and communication.
>
> Paradoxically, it is relatively easy for the developing countries to build the institutions for modern industrialization. Here the inputs of skills, the appropriate training, and the required organizational architecture are all fairly well known, and the scarce components can be imported from the advanced countries. But for massive rural development, the skills are uncertain, the organizational structures are not developed, the leadership is unidentified, and the techniques for motivating change are largely unexplored. Both with respect to theory and practice, organization for rural transformation is probably the most under-developed area of knowledge in the entire field of economic growth.[2]

Within the principal funding agencies, the Agency for International Development (AID) and the World Bank, much soul-searching and thoughtful analyses of alternatives for helping to alleviate the living conditions of the rural poor were undertaken. The Bank's policies were somewhat dramatically launched by an address made by President Robert McNamara to the Bank's Board of Governors at Nairobi, Kenya, on September 24, 1973, when he spelled out the plight of the rural poor generally and those specifically who could be classified as "abjectly" poor. Somewhat more recently, in July 1975, the Agency for International Development, in a document published under the title of "Implementation of New Directions in Development Assistance," indicated to the Congress of the United States how the vast resources of that agency could be used more effectively to deal with some of the problems of the poor majority.[3] These policy pronouncements were preceded by staff studies and followed up by more specific and concrete measures to give effect to the policies.

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[2] Fred H. Harbison, *Human Resources and the Wealth of Nations*, New York: Oxford University Press, 1973, p. 41.

[3] "Implementation of New Directions in Development Assistance—Report to the Committee on International Relations on Implementation of Legislative Reforms in the Foreign Assistance Act," U.S. Government Printing Office, Washington DC, 1975.

Students of education, and more specifically of nonformal education, have been equally concerned about the failure of formal education to take into account the realities of the situation and to find better ways to focus educational resources on the problems of improving the lot of the rural poor. Some of these students, such as Illich and Freire, have advocated stringent–if not radical–solutions, while Philip Coombs, Cole Brembeck and Manzoor Ahmed, among others, have advocated more operationally possible modifications of traditional education to adjust to the exposed and documented realities. UNESCO, WHO, FAO, the World Bank, World Education, the Academy for Educational Development, and other educational and professional organizations have also done considerable research and published numerous reports on the subject.

Several universities, including the University of Massachusetts, University of California at Los Angeles, Florida State University and Michigan State University, under contracts with AID, have engaged in campus and field studies and instructional programs to define and develop educational measures and to modernize educational approaches to take account of the new realities. In this connection, Michigan State University conducted the first international conference and workshop on nonformal education to be held in the United States in April 1974, under the title of "New Strategies for Developing an Old Resource." Subsequently, MSU was requested by AID to plan and conduct a second conference and workshop in September 1976, of which this is a report, on "Nonformal Education and the Rural Poor."

More Specific Considerations

In the period of two years between the two conferences, a number of observations and generalizations about the role which nonformal education could play in making a more effective contribution to alleviating the problems of the rural poor were formulated and taken into consideration in planning the second conference and workshop. The principal ones are cited below:

- Nonformal education is essentially a *method* of defining developmental needs and formulating programs of communication and education to increase the participation of the rural poor in agricultural production, and in programs of nutrition, rural health delivery systems, family planning and other programs designed to improve their productivity and welfare, if not their survival.

- Accordingly, nonformal educational methods are essentially *an integral aspect of all developmental programs* fostered under a variety of private, community and governmental auspices to achieve these ends.
- Most of these nonformal educational activities, although indeed not all, are sponsored by organizations other than ministries of education. Persons from these *other* organizations, along with persons from ministries of education, should logically be invited to the conference and workshop.
- The linear expansion of formal educational programs is not considered as fiscally or functionally possible as a solution to the problems of the rural poor.
- The focus of nonformal educational activities is on adults and out-of-school youth *who make decisions* about the adoption or non-adoption of developmental measures which are designed to improve the conditions which thwart the achievement of high levels of agricultural production and living standards of the rural poor.
- Most of these decision-making adults and rural youth are illiterate, depressed and suspicious of governmental and other external agencies which offer programs designed to assist them. The threat of starvation, the burdens of excessive populations, low levels of health and nutrition and the weakness of local government and rural social institutions are realities which face these rural people.
- Most of the programs, including those under the general rubric of "The Green Revolution" and the development programs which focused on industrial development and improvement of the gross national product (GNP), bypassed these rural people, who constitute the majority of the population in most developing countries.
- The relatively recent expressions of rural unrest and revolution, focused on the need for land reform and other measures, dramatize the need for more sensitive political, if not humanitarian, measures to deal with the needs of the rural poor.

Specific Choices Reflected in the Conference and Workshop Program

The foregoing considerations, although staggering in their implications, formed the background for the design of the conference and workshop program which attempted to deal constructively with them. Although it was apparent that the challenge was too momentous for *any* conference to deal with the ramifications of all the principal problems, nevertheless the conference planners concluded that they should attempt to meet the challenge, even though imperfectly. We could do no less and still focus on what–nearly all agree–are the critical elements of improving the lot of the rural poor.

More specifically, the MSU planners, in close collaboration with officials of the Agency for International Development which funded the conference and workshop, concluded that the following specific choices should be made:

- The participants should, to the extent possible, be a "mix" of persons who use nonformal educational methods in their work in agriculture, nutrition, family planning, educational planning and related fields. It was recognized in this connection that a number of these potential participants, if not all of them, had become much better informed about the potentialities and limitations of nonformal education than was true at the time of the first conference and were, accordingly, ready to go more deeply into the subject. Others, such as researchers, professors and persons in policy positions in these fields, were invited to participate after being informed of the focus of the conference. This decision was made even though it might have been easier to have the conference focus exclusively on agricultural extension, literacy, or some other aspect of the total spectrum of possible applications of nonformal education.

- Recognition should be given to the importance of hearing from officials of the principal aid-giving (donor) agencies on their policies and programs for nonformal education.

- Given the paucity of successful programs of development focused on the problems of the rural poor, it was concluded that presentations and discussions of case studies in some depth would be most helpful. Accordingly, such case studies were deliberately sought in the areas of: (1) comprehensive rural development, (2) nutrition, (3) health delivery systems, (4) family planning, (5) community development, (6) trades training for rural youth (an alternative to formal education), and (7) broadly based "consciousness-raising" programs.

- Spokesmen for these programs—most of which have been in existence for several years (no "crash" programs), and some of them through periods of severe political and social unrest—should be persons who directed or were closely associated with these programs.
- Furthermore, it was understood, and so characterized, that these programs were to be merely *illustrative* of the types of programs addressed to the central problems of the rural poor. Limitations of time required the selection of only a small number of the theoretically possible number of cases.
- Additionally, it was believed that the presentation and discussion of reasonably successful programs, although replete with various problems, would serve as encouragement to practitioners who might be somewhat apprehensive, if not skeptical, or possibly afraid, of doing anything constructive in so difficult a field.
- It was also recognized that several topics which cut across all applications of nonformal education methods would need to be included in the program, namely: (1) graphic media and communication techniques, (2) methods of improving the performance of nonformal educators, and (3) the role of literacy training in development.
- In recognition of the limitations imposed by only three days of conference time—even to illustrate the various issues and programs of development which utilize nonformal education methods to achieve their purposes—considerable planning effort was given to the selection of articles and other materials in the literature which were to be reproduced and made available to all participants. These packets, together with the reproduction of case studies and policy position statements, could serve all participants, but particularly those from foreign countries, as a "mini-library" of professional materials for future reference.
- Apropos of the same consideration was the assembly and display of numerous books, articles and other materials (several items of which were available in sufficient quantities to be given to interested participants) on nonformal education. Materials were also solicited from participants for display and distribution at the exhibit.

- Discussion of all the above was fostered by scheduled discussion sessions, small luncheon discussion sessions at tables seating eight to ten participants, and informal opportunities for discussion at a reception, and the always useful corridor, coffee break and other informal settings.
- The workshop which followed the conference was limited to participants from abroad. The design of the three-day workshop focused on issues raised by the presentations and discussions, and more particularly on *applications* which could be made of the ideas, strategies, methods and related matters to the programs being planned or administered by the participants in their home countries.

In summary, the overriding objective of the conference and workshop was not to probe the mysteries and complexities of rural development *per se*, but to explore on an "interdevelopmental sector" basis (primarily through analyses of illustrative case studies) better ways of relating nonformal educational concepts and methodologies to the central needs of the rural poor.

* * *

An abbreviated conference program is included in Appendix A.

The next chapter is devoted to operational generalizations and issues which are distilled from the conference and workshop presentations and discussions and, to a degree, imperatives which need to be taken into account in planning and administering programs of development which utilize nonformal educational methods to achieve their purposes.

Chapter 2

Some Key Operational Generalizations and Issues in the Use of Non-Formal Education

The design for the conference established in June 1976, as described in the previous chapter, was carried out in September-October essentially as planned. In brief, participants in the conference and workshop represented the mix of backgrounds which reflected many of the principal types of practitioners of non-formal education; a reasonably representative selection of illustrative cases of successful developmental activities (which use non-formal educational activities to accomplish their goals) were prepared and presented by key spokesmen for these programs, and some highly relevant articles and other materials were reproduced and made available to the participants.

The operational generalizations and issues which follow are a synthesis of major points made in the policy and program presentations, reports and discussions of the conference and workshop, and the selected articles which were distributed to all participants.

An introductory point is that very little if any time was used in discussing definitions of non-formal education or of development. The working definitions[1] provided in communications with participants appeared to be satisfactory as a basis for getting into sustained discussions of the ways of utilizing non-formal educational methods to involve the rural poor and the organizations and resources available to assist them in improving their standards of living. There was sober recognition of the magnitude and complexity of the task of improving living standards of the rural poor. Non-formal education was not seen as a panacea or new educational or developmental magic to be employed. No simplistic solutions were advanced. The mood of the conference was serious and realistic but hopeful and forward-looking.

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[1] Non-formal education is defined for our purposes as the *method* of assessing the needs and interests of adults and out-of-school youth in developing countries—of communicating with them, motivating them to participate, helping them to acquire necessary skills, to adopt behavioral patterns, and related activities which will increase their productivity and improve their living standards.

Development programs are defined for our purposes as those which involve activities in agriculture, health and nutrition, family planning, community development, literacy, public works and related fields designed to improve production and living standards of the rural poor.

The interrelated generalizations which follow classify somewhat naturally into three groupings: (1) Those which are more strictly related to planning and preparatory considerations which emphasize the sociological, anthropological, cultural and historical background of the expected participants, e.g., "Respect for Cultural Values and Norms"; (2) Those which are more closely related to operational and managerial requirements, once the nonformal educational and developmental activities are planned and underway, e.g., "Development Workers Must Have Something Useful to Offer," and (3) Those which must be taken into consideration at both the planning and operational stages, e.g., "Role of Women."

Planning and Preparatory Generalizations

A. *Wisdom of the Villager*[2]

Most factors involved in successful developmental work with the rural poor, using non-formal educational methods, may be open to a certain amount of dispute or varied appraisals, but a few elements stand out as being universally important. The next eleven operational generalizations fit this characterization. The most *universal* is probably the desirability—if not practical necessity—of recognizing, appreciating, and utilizing the basic wisdom of the villagers as the starting point of any developmental activity. These people have elementary wisdom about their living conditions, soils, crops, local ecological conditions, social institutions, and the risks inherent in attempting to try something new. They have keen insight about their needs and priorities, although often unstated, and possess elementary wisdom about means and methods of solving their problems, which is indispensable to those who may be able to help them. Most of them are efficient producers given the resources they have to work with. They may be illiterate, but not unintelligent. They may be cautious, depressed, skeptical and resistant to change, especially if imposed by an outsider or government agent, but all these qualities or characteristics need to be respected as the basic framework in which projects and programs are formulated. They may, for reasons of natural diffidence, or language, or long established habits of insecurity or fear, be hesitant to express themselves, but these characteristics should not becloud the point or lessen the efforts which persons who are offering alternative behaviors or viewpoints must make to ascertain the real needs and problems involved in the adoption, by them, of some kind of change. As one participant put it, development workers[3] need to "hunker down with the villagers" for an assessment of their needs.

---

[2] For purposes of convenience the term "villager" will be used subsequently to mean basically the "man of the soil" by whatever name he may be called, be it peasant, campesino, share cropper or other.

Obviously not all villagers are wise, or have deep insights into their problems and ideas about possible solutions. Some, possibly even many, may have viewpoints and behavior patterns which are inimical to development and to their own welfare and that of their families, e.g., excessive drinking and other negative behaviors. Furthermore, even the wisdom of the villager is sterile or dormant unless it is utilized by development workers as background for the introduction of changes which are acceptable and potentially beneficial. Thus the process of determining the starting point of a nonformal educational process, leading to development, may be expressed as the interaction between those closest to their own needs and problems and anyone outside of the inner group who is trained in eliciting information from villagers, organizing it in useful form, formulating programs on the basis of the information obtained and stimulating villagers and village groups to make changes which combine their wisdom and insight and that of development workers.

The subtleties and complexities referred to do not mean that the development workers should consider themselves stymied or helpless in ascertaining the real needs and priorities of villagers and rural groups, but it does mean that genuine rapport, empathy and trust have to be established before the first measures involved in the adoption of the otherwise untested new idea, attitude or practice can be taken. This process may take varying amounts of time and utilize various techniques, from holding "camps" for villagers to discuss needs, the use of "consciousness raising" techniques and games, agronomic surveys, or more elaborate "baseline" studies.

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[3] For purposes of brevity the term "development workers" will be used subsequently to describe the person or persons who advocate changes. Synonyms for the term may be program planner, facilitator, promoter, or the more commonly used "change agent."

* * * *

Résumés of case studies, panels, speakers and reproduced articles provide specific or more generalized background information in support of the operational generalizations. They are numbered at the upper right hand corner of each document for easy reference in subsequent chapters.

A primary source for a number of concepts expressed above is found in the reference numbered 17 on page 180. Items numbered 4, 5, 6, 10 and 18 also provide information on the generalizations.

B. Respect for Cultural Values and Norms

A parallel requirement, closely associated with the above, is the necessity of respecting the cultural values, norms, religious and other practices of individuals and groups with and for whom changes of behaviors, attitudes and practices are being proposed. This requirement does not presuppose an unchanging *cultural monolith* but rather a framework or starting point from which change can take place. Another way of expressing this point is that changes which are being proposed have to be reasonably compatible with the social customs and norms of the individual or group, but *susceptible* of change or adaptation, particularly if advocated or demonstrated as culturally, economically and operationally viable *by individuals within the group or by village groups*.

Some of the cultural values which are held by villagers and village groups, however, may be dysfunctional and may inhibit making changes which, if adopted, would increase the productivity and well-being of the persons who embrace these values. Families too large to provide adequate food for all members, the sometimes excessive value placed on male children, various views about the causes of sickness and methods of healing, dysfunctional or counterproductive cultural practices with reference to agriculture may be illustrations of cultural values and norms which, if not sensitively modified, may hinder the achievement of higher living standards.

In other words some cultural values and norms are more susceptible to, or compatible with, change than others. Those changes advocated by development workers which promise more immediate and easily demonstrable results, such as higher yields of crops, illustrate possibly the easiest category of change to make. Promised changes in nutritional habits which may take some time to demonstrate their validity and usefulness may represent a more difficult category. Changes which run counter to religious precepts of rewards and punishments may represent a third category of the highest difficulty. It is assumed, however, that proposed changes in practices which offer the promise of aiding in the solution of problems related to survival itself—starvation, massive malnutrition and disabling diseases—will be more readily adopted even if some cultural norms and beliefs and practices have to change. Other problems, less vital to survival, will have to be worked out in the framework set forth in *A*, with unhurried discussion, the incorporation of some aspects of indigenous cultural practices into the proposed changes, and perhaps more importantly, experimental demonstrations of changes which come to be accepted as desirable.

Other cultural practices which are somewhat outside the villagers' capacity to change, at least directly, and which are of equal or possibly even greater negative influence are practices such as excessive ownership of land in the hands of a few, absentee management and control of the land, maldistribution of wealth and oppressive curtailment of basic freedoms of expression, assembly and communication. These may require *structural* or major changes in the policies and practices of government or other power structures. Effective use of non-formal educational methods of communication and interaction may make for *orderly changes* in the cultural norms and power structures which stand in the way of more equitable frameworks, but *violence* and *massive changes* may occur as an unintended by-product of increased participation of villagers in nonformal educational and developmental activities which require basic policy or structural changes for their fulfillment. Massive changes may also, in turn, require the use of nonformal educational methods to implement such changes after they are made, as is being demonstrated in the ARDU project in Ethiopia, described in pages 74 to 82. Stated another way, it is not always possible to predict exactly what will happen when increased awareness of possible changes and the adoption of actual changes, vitally related to survival in areas such as food production, health and nutrition, actually occur on a massive scale. Governments and organizations which genuinely desire to improve the lot of the rural poor will *encourage* and *embrace* such changes. Others may be *compelled* to make structural and other changes in order to maintain peace, law and order, and achieve development goals.

Reference No. 10, page 111, is a primary background source for the above operational generalization, but many other sources such as 2, 4, 5, 6, 9, 17, 18, and 19 make some reference directly or indirectly to the point.

C. Use of Indigenous Social Organizations and Local Leaders

An aspect of the above generalization regarding respect for cultural values and norms, and of the subsequent generalizations regarding the extended use of paraprofessionals in reaching large masses of the rural poor, is the *desirability* and *practicality* of utilizing indigenous social organizations and local leaders in the non-formal education programs involved.

These organizations and their leaders are a prime means of communicating about, seeking support for, and legitimizing the adoption of changes of attitudes and behavior which will lead to improvements in the living standards of individuals and groups. Apropos of this point, one participant expressed the opinion that "too much effort is concentrated on establishing needs assessment, delivery systems, communication media, and too little on the discovery and utilization of local resources and people with natural talents." But the two types of assessment–needs and resources–are basically inseparable. Village councils, credit societies, mothers' clubs and other such organizations are being used as "forums" for discussion of possible attitudinal and behavioral changes, as linkages in a training network of professionals and paraprofessionals, as organizations which create capital and monitor credit programs and which may plan and administer programs of labor intensive public works.

This is not to imply that the discovery and utilization of indigenous social organizations and local leadership is an easy task. The expansion of the functions of an already established and indigenous organization to absorb new nonformal educational and developmental functions being proposed may not be compatible or possible. New organizations, acceptable to the villagers, may have to be created. *Formal* leaders (village chiefs, headmen, elected leaders, or others) may be easy enough to identify, but they may not be supportive of the changes being proposed or required. Other leaders, possibly younger persons, may be better able to provide the leadership or render the services required for development. But they will doubtless have to be acceptable to established leaders.

In summary, this aspect of the mix of key factors in nonformal education and development, like others, is difficult to diagnose and utilize. But one point seems certain—*if* indigenous social organizations and local leaders can be found, the framework for the creation of a viable nonformal educational and developmental program will be easier and predictably more successful.

Reference No. 9 page 106 describes a program almost wholly designed to utilize an indigenous social organization. References numbered 2, 4, 5, 6, 10, 17, 18, and 21 all make reference to the generalization.

Operational-Managerial Generalizations

D. Development Workers Must Have Something Useful to Offer

Designing a project or program which focuses on the real needs and wisdom of the villagers and is culturally acceptable, is only the *starting point* of development and education. Empathy and acceptance are not enough. The modifications of conventional behavior/practices recommended by development agents must be soundly based, demonstrable, practical and within the means and abilities of the individual villager or groups to adopt. The changes recommended must be capable of accomplishing better results than are currently being practiced. Development agents who do not meet these pragmatic tests may find the prestige and acceptability of their recommendations reduced if not virtually eliminated. This does not mean that the development agent must *always be right*—indeed his "recommendations" may well be expressed as tentative possibilities to be tested by villagers under their normal living conditions, or by those more risk-taking villagers who agree to establish test plots or demonstrations, or who are "early adopters" of recommended practices. His recommendations must ultimately, if adopted, however, lead to real or perceived improvement in the life of the villagers. The implications for technical and human relations training of generalists and specialists to qualify on this point are clear. Training for both types of change agents must be functional and, in light of changing needs of villagers, frequent or continuous.

Reference No. 20 page 203 makes direct and significant comments on this point. Other references include, directly or by implication, numbers 4, 5, 6, 8, 9, 17, and 18.

E. Necessity for Increased Numbers of Paraprofessionals

The magnitude of needs for more productive agricultural practices, medical services, family planning services (where culturally acceptable), and other services designed to improve the welfare of the rural poor requires a recalculation of conventional ratios of professional development workers to persons served. There are just not enough agricultural colleges, medical schools or family planning clinics to produce fully trained professionals to serve the needs of the rural masses, even if it were possible to fund such training centers. The only practical alternative is clear—the training of paraprofessionals in all service fields. Fortunately, the record of training of paraprofessionals, even with very few years of formal schooling, and the provision of necessary services in all of the above named fields is clear and positive. Furthermore, in some instances the only (or most likely to be successful) facilitators or promoters acceptable to the villagers are the persons whom *they* have selected to be trained and authorized to provide the necessary services. These persons are more likely to combine the wisdom and skills of local practitioners and the more scientifically sound practices recommended by trained professionals than would persons who are unfamiliar with useful indigenous practices. Carefully designed training programs, particularly those which have practical performance tests, retraining opportunities and restraints to perform beyond the training received, are essential elements in the use of paraprofessionals. One caution may be relevant. As the number of paraprofessionals in any one field becomes large, there is the possibility that they may take on some of the dysfunctional habits of the established bureaucracies. As one knowledgeable person expressed the point, with an illustration coming out of Southeast Asia: "We don't need any more 'mini-mandarins' "

References Nos. 7, 8, 9, 10 and 18 speak directly and forcefully to this generalization. Numbers 4, 5, 6, 11 and 17 also make important comments on the point.

F. Integrated Approaches and Programs

A more complex and subtle aspect of effective developmental non-formal educational work with villagers is suggested in the term "integrated." More specifically, it means that villagers live their lives as "wholes," and all changes which are proposed or services offered are evaluated in terms of how they fit into their total life styles and priority needs. Their lives are in many respects simpler, less compartmentalized and more integrated than persons living under more complex urban conditions. Hence, the message of the development agent—be it nutrition, agricultural improvement or family planning—may not be well-timed or conceived to be of prime importance to the villager or his family. The recommended changes must also take into account what is already being practiced in any particular field. As Behrhorst discovered, (see page 187ff) the priority needs as perceived by the villagers, even in so vital a field as medicine, may not be those which a particular development worker, at a particular time, may be able to assist in providing.

Something needs to be modified—either the development worker must be willing and able to respond to the priorities of the villagers, even though not in his area of special competence, or be able to secure other assistance, or otherwise help villagers find more viable solutions for their problems. Development workers must, accordingly, be flexible and more broadly trained to maximize the self-help potential of the villagers, or be associated with an organization which anticipates and is able to respond to various needs of villagers with scope beyond a single area of service. The organization might be called "rural development," "community development," or some other organizational name which connotes a broader area of service than does compartmentalized or single sectored agriculture, nutrition, or health service.

Programs like Comilla, ARDU, Puebla (see case descriptions, page 52ff), are rather complex illustrations of integrated programs which serve the needs of their clients more flexibly and comprehensively. The important concept here is that the needs of villagers are usually not as compartmentalized as the abilities of the development workers (or the organizations with which they are affiliated), and that means and methods must be found to build on *intially expressed* and *urgent* needs which may spread to other areas of need as they are expressed in a *growth process*. At a minimum, better methods need to be worked out for the timing and coordination of various services which may be available to villagers and village groups.

Stated in another way, what is most likely to happen in a growth process is that villagers (particularly those who have not modified their traditional ways or adopted many new practices) may cautiously accept a small change which is construed to be least threatening and potentially most useful. If this change is found to be beneficial, a readiness is developed for additional changes possibly in several areas of their lives which are culturally more sensitive. Over time, change itself may become a part of a new life style.

References 4, 5, 6, 7, and 18 provide specific information on this generalization. In addition, references 8 and 9 are relevant.

G. Necessity of Governmental and Villager Support and Commitment

Developing countries, like the more developed, are *sovereign nations* and are, accordingly, in varying degrees, responsible for the well-being of their citizens. Thus, whether programs designed to assist the rural poor are administered under private, cooperative or governmental auspices, the governments in power determine the ground rules for the operations and decide to what degree the program will be supported by its resources or those which may be secured from external sources. The ideal situation is one in which support of any kind (from either internal or external sources) is made available in amounts commensurate with the needs and the ability of villagers to utilize the resources *without diminishing* their own commitment, responsibility, or dignity.

An aspect of host governmental responsibility is that of coordinating the timing, character and volume of external assistance which may be available. External organizations have sometimes, in their zeal to be helpful, made the process of coordination of developmental activity more difficult for host nations by exerting undue pressure to have their services utilized at a particular time, to have their standards enforced, or to otherwise interfere with basically national determinations. Furthermore, unless adequate provision is made to fund the work after outside resources are no longer available, much of what had been gained during the period of outside support is lost. External organizations must also adjust their services on an inter-sectoral or coordinated basis in response to host governmental policies to integrate and possibly decentralize their services to the rural communities.

A persistent and difficult problem for governments is the allocation of resources, as between urban and rural and other sectoral breakdowns. Generally speaking, the rural sector has received less than adequate allocations of resources, in comparison to the urban sector, to foster improved agricultural production and rural health, education and other services. The limited results achieved in the Green Revolution by small farmers in food production, and even more in rural development, plus excessive allocations to industrial development, previously noted, have created the need for governments to reappraise their commitment to the rural masses. A specific consideration in this regard is the response of governments to innovative programs of development or to "peasant movements," both of which may be aided and abetted by non-formal educational methods. Governments may see in these innovative practices and movements changes which are conducive to development, reduction in migration to the cities and to rural unrest, *or* as threats to national security. The attitudes and actions taken may have far-reaching effects on non-formal education.

Likewise, it is imperative that villagers make commitments of their own resources, their energy and their willingness to change. As is well demonstrated in the Comilla (see page 54ff) and other projects, villagers must desire and be willing to learn, although illiterate, to pay for services, to save, or otherwise enhance their resources, even though near starvation or bankruptcy. "Give-aways" are not conducive to stimulating commitment but support prices and experimental inducements to change may be in order until the economic viability of the change has been demonstrated. This is not to suggest that villagers, any more than urbanites, have responsibility for paying for services which are universally made available by governments for all its citizens. Labor for public works should be compensated whether urban or rural. Advantage should not be taken of the low economic status of the rural poor, or by assuming that villagers can help themselves out of their difficulties without additional resources which are needed to improve the situation or solve the problem. "Self help" is often thought of as applying more to the solution or alleviation of rural problems than to urban problems. For example, planners and government officials are much more likely to expect rural people to give land and labor for building a rural road when they would not apply the same thinking to building a city street.

Almost all references make relevant comments on this generalization, particularly the aspect of government support. References No. 1, 2, 3, and 17

are, however, particularly relevant. Reference number 10 describes a project with precarious "post experimental period" support which, happily, is on the way to correction.

H. Necessity for Availability of Supplies or Other Resources When Required

It is perhaps self evident that when development workers, using non-formal educational methods, persuade villagers to use chemical fertilizers, family planning methods, or any other practices which require supplies or equipment, that the supplies or equipment (whether paid for or given away) had better be available in adequate quantities and on time. The failure to do so may set the program back some time, as in the Poshak Project (see page 94ff), or raise questions in the villagers' minds about the credibility of the development workers and the governmental, international or private organizations which employ them. The provision of supplies to support recommended practices must be built into the plans and budgets as an *integral* part of a whole strategy of development and change. Furthermore, the supplies and materials must be available on a *sustained* basis if satisfactory results are to be obtained. Development changes are not fostered by "off" and "on" availability of resources, if better planning and administration can avoid such fluctuations. Fortunately, villagers are typically non-aggressive or tolerant, which may permit a margin of error to be made without calamitous results.

Reference No. 7 makes pointed remarks about how the failure to have supplies available on time delayed aspects of the program for a year. References 4, 5, 6, 9, and 12 describe projects in which supplies and equipment are of special significance.

Planning and Operational Generalizations

I. Literacy

The oustanding generalization to be derived from the programs described and discussed in the conference is that universal literacy is *not essential* as a *prerequisite* for the conduct of non-formal and educational activities to achieve developmental goals defined broadly as they are in this report. In fact, literacy may be thought of as more of a "convenience" or "need" of development workers to get their messages across than of the needs of villagers. In other words, development workers may be so dependent on literacy that they feel stymied in working with illiterates. Obviously they are *required* to work within the framework of illiteracy even though it may be slower and require more patience, if they are to reach the rural poor.

This does not mean that literacy training, particularly functional literacy training, is unimportant as a means of opening new vistas of the mind, fostering human dignity, lessening dependence, or achieving other important values, but only that it is *not indispensable* to development. Illiterates can be: (1) taught to adopt new practices or acquire new skills (if they so choose) through the use of appropriate non-formal educational methods; (2) trained to serve as paraprofessionals or other development agents, and (3) otherwise trained to participate in, or foster change among, their groups. Development workers are also able to use literate villagers to help illiterates to understand written messages or otherwise to participate in development activity. Furthermore, since the large masses of illiterate adults and out-of-school youth are the *decision makers*, here and now, there is no practical alternative but to find and use effective methods of communicating with them, and enabling them to make decisions which are useful to their welfare.

The presentation by T. A. Koshy, No. 15, is wholly devoted to background on this generalization. References 4, 5, 6, 8, 9, 10 and 18 among others, make some comments on the point.

J. Communication Systems and Methods

All programs described at the conference and the special panel on communication and media methods dramatized the importance of devising communication (non-formal educational) methods to convey developmental messages which are informative, persuasive, and attuned to the thought forms and cultural patterns of villagers.

The communication systems or methods may utilize only relatively simple graphic devices and audio-visual aids which supplement oral presentations or discussions with relatively small groups in restricted geographical areas, *or* more complex communication systems (e.g., radio, land-based or sattelite television), covering large areas which may be used singly or in combination with group discussions, agricultural agents, or other components. (For the latter, see the description of Basic Village Education Program, p. 121ff). There is a clear need for more experimentation in the use of communication methods whether simple or complex. Furthermore, there appears to be a consensus: (1) that the use of two or more media in any combination is *likely* to produce better results than any single medium, and (2) that the messages which are communicated must be pertinent to the needs and interests of the villagers—well timed, clear, persuasive and sustained.

Reference No. 13 is wholly devoted to this subject, No. 11 describes an experimental project in this field; but almost all others—4, 5, 6, 7, 8, 9, 10, 11, 16 and 19 make relevant background comments.

K. The Role of Women in Non-Formal Education

Although the role of women in non-formal education was not singled out for separate treatment *per se*, the participants in several cases were principally women. Other cases treated participants without reference to sex. Still others, such as the integrated rural development cases (Comilla and ARDU), had some special activities for women participants. The exhibit of non-formal educational materials had a special collection of materials on work with women. Nevertheless it became clear that not enough attention was given to the special problems of involving women (and girls) more in development activities. Or, as a wise student and practitioner of development activities in a Muslim country has said, "Society cannot stand on one leg."

Furthermore, cultural variables with reference to the role of women influenced practices in probably all types of non-formal educational activities cited in the conference. But the sentiment of the participants was clear—namely, that women should be regarded as *full partners* in the development process as contributors and beneficiaries, and as such should be involved not only in areas conventionally and traditionally reserved for women (e.g., child care) but in all other areas as well.

Although the participation of women is referred to in a number of projects, references No. 7, 8, 9 and 15 are of special importance on this point. Other references numbered 4, 5 and 14 may also be examined.

* * *

To the extent that the case studies and other materials cited in the foregoing constitute a representative sample of major types of programs related to the present state of the art of non-formal education, the operational generalizations indicated may provide a summary (or even a check-list) of where we are in this field. Contrariwise, the extent to which there may be major omissions in the source material or misinterpretations, or biased selections by the author, the operational generalizations may be incomplete or inaccurate. One safeguard to assure a reasonable degree of objectivity is the provision of résumés of most of the presentations, workshop reports and selected articles which constitute the major basis for the generalizations keyed to these materials. Thus the reader is in a better position to challenge, amend or otherwise modify the author's formulations or perhaps, even better, make up his/her own. Efforts to improve the condition of the rural poor, and the part which non-formal educational methods may play in these efforts, are sufficiently complex that prudence requires a cautious mien and a thoughtful approach. It is in this spirit that the generalizations are offered, not as prescriptions but as material for thoughtful consideration as they were so presented and discussed in conference and workshop sessions.

* * *

Issues and Other Considerations in the Use of Non-Formal Educational Methods

A number of topics were touched upon in several of the presentations and discussions which might be classified as unresolved issues, or about which there appears to be less of a consensus or basis for generalizations and operational suggestions. The line between each category of comment is certainly not hard and fast, but reasonably discernable for discussion purposes. It is in this spirit that the following observations are made, in no order of importance or criticality.

A. Relationship of Non-Formal Education to the Formal Educational System

As indicated before, most non-formal educational activities are conducted outside of the formal school system. Without belaboring the point, most formal educational programs bypass the needs of the rural poor. The wasteful drop-out rate, or the never-have-been-to-school rates, dysfunctionality such as urban bias of the curriculum, or other characteristics of the formal school system, all add up to the fact that the development decision-makers are not now, and in many instances have never been, part of the formal school system. This very widely accepted generalization suggests the unreality of trying to attune, in any reasonable period of time, the formal school system to the needs of the rural poor. A number of participants also expressed concern, if not fear, of "formalizing" nonformal education and thus losing one of its key virtues. Patrick Van Rensburg (see No. 12, page 132ff) stated that after trying patiently to reform Botswana's formal school with a fresh and more realistic approach to trades training for secondary school "rejects," he concluded that it was extremely difficult if not impossible to do so. Nevertheless the formal school system has, in many instances, the only institutional resources and personnel in rural areas, particularly remote areas, and should be of some use for an expanded non-formal education program and clientele. Central ministries of education also have some staff resources in learning theory and teaching techniques which might be applied or modified to fit a non-formal framework. But the reader would do well to ponder the advice of Duncan Ballantine, Director of the Education Division of the World Bank, that the first step in formulating educational programs should be to ask basic questions *about societal needs* and then choose a method which best fits the need. Non-formal educational approaches are now more clearly attuned to the needs of the rural poor. But the leaders of the formal school might be able to readjust their resources to make a larger contribution than is now the case. There is some evidence that the so-called "innovative" educational projects, financed by the World Bank, are making some progress toward a better integration of formal and non-formal educational programs and use of resources.

Reference No. 12 is fully devoted to this subject. In addition, references numbered 3 and 4, among others, have some material on this point.

B. Evaluation

Except as evaluations of results were reflected in specific program accomplishments reported by the authors (e.g., increase in numbers of cooperatives, use of improved seeds or tons of fertilizers used, contraceptive devices distributed, nutritional supplements provided, etc.), no major attention was given to evaluation *per se*. Nor was it brought up as an issue, or as a major obstacle to justifying developmental activities which rely on the use of non-formal educational methods to accomplish their purposes. It is possibly a good situation as it is, since there are so many critical problems in getting effective programs underway for the long-neglected rural poor that excessively complex or premature attention to evaluation may stymie or unduly discourage needed efforts. Furthermore, evaluation is related to objectives and to the extent that objectives may be superimposed by external agencies, the methods of evaluation employed for such activities may be irrelevant from the point of view of villagers.

This is not to suggest that when increased use of fertilizers, or reduction of endemic disease, or some other specific result is the goal of the activity, that appraisal or evaluation methods be any less rigorous than those employed in other developmental activities. But many areas of development and the use of non-formal educational methods require more innovative methods of evaluation. Examples may be those which are addressed to early stages of evolution of viable programs for which tested "models" may not be available, or which deal with more intangible aspects of development, such as attitudinal changes which necessarily precede the adoption of new practices. Furthermore, since adults can choose to be non-participants in developmental activities which are not construed as relevant to their needs (in other words, they can easily "turn off" the development message), sheer participation may be interpreted as an elementary form of evaluation. Indeed, if nothing else happens as a result of the "exposure," there is not much to evaluate, but rigorous evaluation methods may easily be premature.

The timing and use of various methods of evaluation are clearly subjects for research as the workshop group on research so recommended. In the absence of appropriate evaluation methods, systematic logs of activities, monthly reports and operational studies may provide enough guidance to policy makers to make decisions about the direction of the project and changes which may be necessary to make it more useful in meeting the needs of the rural poor.

Reference No. 11 describes a project in which evaluation of several non-formal educational methods are of central importance. Other references are made in 1, 4, 5, 6, 7 and 12.

C. Replicability/Transferability of Non-Formal Educational Methods

Some expression was given to the viewpoint that the cases presented and some of the other ideas, concepts or methods were *not* replicable in other situations or environments. This position was also applied to pilot or experimental projects which might not be replicable *in toto* in the countries in which they were conducted. There certainly is no argument about the unlikely replicability, unchanged, of an integrated and complex development project to another situation or culture. Furthermore, there is probably no need to repeat an experimental/pilot project in all areas of a given country. But this *degree of replicability* is putting more burden on an idea or demonstration than it should bear. A more reasonable approach would be to check out the extent to which the successful *principles* demonstrated by the Puebla project, (see page 83ff) for example, had something to contribute to the vast PIDER project (see page 33ff) in Mexico; or the extent to which CADU had value to its successor organization, ARDU, fostered by the revolutionary command; or the mothers' clubs of Korea as an organizational device to similar indigenous womens' groups in other cultures; or the demonstration of the Guatemalan paramedical health program, described by Behrhorst, has to other situations and cultures. The list could be extended.

Thus the question comes down to *specific analysis* of the successful use of non-formal educational methods and other components and the use or adaptation of its essential features to another culture or environment. The application or replication of ideas and techniques in non-formal education involve no essentially different thought processes than those which apply in any other field. A perhaps optimistic guess would be that there is more that is transferable of successful experiences in one situation to another situation, with innovative adaptation in some instances, than is not. A thoughtful, if somewhat extreme, treatment of the subject, namely, that of the possible use of the Chinese experience in the use of non-formal educational and communication methods, is found in the résumé of Schramm's article on the subject, item 19.

Reference No. 19 addresses itself to the basic question of replicability across cultural lines and political systems. References 4, 5, 6, 8, 10, 11, 12 and 21 provide relevant information on the generalization.

D. Cost Accounting for Non-Formal Education

Curtis Farrar, Asst. Administrator of AID, indicated quite clearly in his remarks that non-formal educational activities and expenditures related thereto are, for the most part, an *integral part* of the agricultural, nutrition, or other program activities which are undertaken (see page 36ff). Others commented in the same vein. A clear exception may be made with reference to expenditures which are made for literacy or other programs which may in no way be tied to other program purposes. The admixture of costs for substantive purposes which are aided in achieving such purposes by non-formal educational methods may not bother anyone (and possibly should not) but those with a penchant for cost accounting. There is probably no reason to separate out costs which could be attributed to non-formal education than separating out any other components of joint costs. The major question to be asked is, "Did the activity produce the intended or hoped-for results at a cost which knowledgeable persons would regard as reasonable?" If villagers are starving or in urgent need of medical service, the tests of productivity and efficiency should be related to whether the food or medical services were indeed produced and delivered at the lowest cost possible. Programs less related to survival itself may very properly be guided by the results of more complex cost-benefit ratios, cost effectiveness measures, or other criteria.

Although a number of references include information on costs, the most specific references to the point are in Nos. 2, 4 and 8. Nevertheless, almost all references provide information on projects in which "joint costs" are clearly apparent.

E. Theoretical Underpinning of Nonformal Education

The foundations for most nonformal educational/developmental projects reported on at the conference are essentially pragmatic and functional, related as they are to elementary needs for food production, improved nutrition, and better health care. The Ecuador Project (see description, page 111ff), however, is more closely tied to Freire's more indirect concepts and strategy for emancipation of the rural masses. Furthermore, concepts of anthropology, social psychology, sociology and learning theory are implicit in much of what has been distilled as "generalizations" in this report. For those desiring a theoretical construct for non-formal education, the article by La Belle is included as item 22 in Chapter Nine (see page 211ff). Perhaps as more experience is gained, articulation of the theoretical foundations for non-formal education may become more important or necessary, but it may be argued that theory should be derived inductively from action programs. The one consideration which seems clear is that the needs of the rural poor are urgent and compelling, and long overdue. Furthermore, respect for the villager's capacity to judge the usefulness of what is proposed and to reject that which is irrelevant or alien to his purposes is apparently considered by most participants as a sufficient guide for action, at least for the present.

The subject matter of reference No. 22 bears directly on this generalization. But if "strategical formulations" may be considered as involving elements of "theory," several additional references may be cited, as follows: 4, 5, 6 and 12.

F. Research

The scope and number of researchable topics related to development and non-formal education, as reported by the workshop group on research (see page 160ff), covers almost every conceivable aspect of the field. The need for examining the supporting social sciences; the design of appropriate "curricula"; the documentation of changing attitudes before, during, and after participation in non-formal education; research methodologies appropriate for non-formal education, and many other topics were cited. Two generalizations may be appropriate on the subject of research: one is that we are in an elementary stage of sorting out what we know and do not know about a variety of aspects of non-formal education, and two, that a great deal of experimentation and adaptive research is needed to establish priorities and create useful designs for getting at the most critical problems facing this complex subject, as earlier noted in the remarks of Frederick Harbison.

Perhaps it is fitting to hypothesize, in closing, that regardless of whether non-formal education is retained or not as a concept or means of describing the method by which the rural poor are informed and helped to participate in a variety of development activities which they ultimately embrace or reject—their needs and society's needs to respond positively will persist. The immense gap between the world's poor and the more affluent must be bridged. As the old wags say, "The poor will be with us always," but the world's poor *needn't* be as poor as they now are, nor as undernourished, sick or despondent. The wider and more experienced use of non-formal educational methods, combined with better resource allocation, more competent and dedicated development workers, more realistic and better designed projects and programs based on genuine villager needs and commitments, and more imagination applied generally to the problems of the rural poor, should make a positive difference in the condition of the world's poor.

Perhaps the report of the conference and workshop will slightly reduce the gap between where we now are and where we need to be.

Chapter 3

Policies and Programs in Non-Formal Education

Views of Two Major Funding Agencies

Editor's Note

The use of non-formal educational methods to increase agricultural productivity, foster rural development, and improve the living standards of the rural poor is not new. Many private organizations, missionary and others, and governments of developing countries have for many years fostered programs to achieve these aims. But the programs of private organizations have generally and understandably been small in scope for a limited clientele, and often experimental in character. Government programs have likewise been highly inadequate in scope and quality to do more than scratch the surface of the needs and potentialities of the rural poor.

As developed earlier in this report a number of trends—economic, political, humanitarian and social, have illuminated the need to greatly expand national and international efforts to increase the participation of the rural poor in the improvement of their conditions with help from their governments and, when requested, the help of international organizations. Fortunately, the activities of the private organizations and governments have provided a useful experiential base, however modest, for expansion of these badly needed activities and improved approaches. But much more experimentation and careful analysis is needed for guidance of expanded programs which are aided and abetted by the more positive policy positions set forth in the following statements.

Indeed, there is room for the continuation and expansion of programs of private organizations, many of which are funded in part by the Agency for International Development. These efforts will continue to extend the participation of the rural poor in the improvement of their living standards. But as successful methods have been found to work, there is also room for more *massive* efforts of governments and international agencies, commensurate with the needs of the rural poor, to build on these methods and experience. These efforts are needed to quicken the pace of development for the long neglected masses of the world's poor. The statements which follow spell out some of the bold new policies and priorities which are currently fostered by the Agency for International Development and the World Bank to achieve these programs.

Résumé of No. 1

World Bank Policies for Rural Development

by August Schumacher[1]

Rural Development Division, World Bank

Rural Development Program: Scope and Major Policies[2]

Since the Bank started operations in 1946 it has participated in funding approximately $16 billion in agriculture and rural development programs, half of which were funded by the Bank and half by member governments. Currently the Bank group is providing approximately $1.75 billion annually for agricultural and rural development projects. The Bank group has now become the largest single source of money for investment in the rural sector of developing countries. Yet, while these sums seem substantial, they only amount to some 2 to 3 percent of the total annual investment in the rural sector. Virtually all the remaining investment is provided domestically; by farmers, banks and governments.

During the first fifteen years of the Bank's existence, only about 10 percent of total lending was for the rural sector, and these loans were focused largely on capital intensive irrigation schemes, such as those made to Mexico for commercial vegetable growing. During the middle 1960s the Bank began to broaden its lending directly at the farm level, mainly through development credit provided via public and private intermediary banks. The credit was tied to increasing technical packages which necessitated prior adaptive research. The loans also required that the local banks engage specialist agriculturists to appraise and supervise such loans to assist farmers in making the necessary cropping and livestock changes.

Nevertheless, as the Bank and its member borrowers entered this decade, both parties were dissatisfied with their support to the rural sector. The strategy until then had been to target mainly the farmers who were most receptive to credit and new technology. For the most part, these were the larger farmers, the ones who benefitted most by the Green Revolution. The bulk of the farmers and landless laborers in developing countries, one hundred million families, were bypassed by these policies.

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[1] Biodata on Mr. Schumacher and all other principal resource persons indicated in Appendix E.

[2] The bank's policy position paper on "Rural Development" published in 1975 was made available to all participants.

These considerations gave rise to a major change in Bank policy which was enunciated by President McNamara in 1973. The new policy focuses directly on improving the income and quality of life of the rural poor, both farmers and the landless. Although some of the Bank loans continue to fund irrigation and credit programs which benefit larger farmers, the support for investments that benefit the lower income groups in the rural area has been *increasing* in accord with the new policy. It is now recognized that unproductive small farmers contribute little toward solving problems of malnutrition or inadequate food production in either rural areas or the towns. There are more than 100 million farms of less than five hectares on which a billion rural inhabitants live who have average per capita incomes of less than $US 100. These people—the rural poor—are the target group for loans under the new policy even though the average family income in different countries may vary considerably; for example, from $400-$600 in Mexico to half these averages for Tanzania.

Another consideration which is associated with the new emphasis on rural development is the recognition that the rural poor and their farms constitute a substantial cadre of potential resources which has been overlooked by the earlier development theorists. Rather than be passive recipients of a "trickle down" concept of growth, the Bank believes that the millions of poor smallholders can, and are, contributing significantly to the development process through higher productivity. At the same time, the rural poor should receive their fair share of an improved quality of life: better health care, housing, sanitation, water supply and nutrition.

Although the Bank is at an early stage of assisting the process of rural development, a number of "lessons" of this experience have begun to emerge, such as:

– Governments' commitments to rural development are increasing.
– Although the prestige of rural development workers is very low ("considered bureaucratic banishment"), a few countries

like Mexico, Tanzania, Korea, and some states in India have made major efforts to radically improve the quality and supervision of their local official cadres.

- The development of an *appropriate* technology package (seeds, fertilizer, pesticides) for different ecological regions, amount of rainfall, and other variables is essential.
- The incorporation of labor-intensive methods in performing basic infrastructure tasks (e.g., feeder roads and water supply systems), seasonally timed, encourages villagers to work in groups and also provides income for purchasing improved livestock, seeds, fertilizers and other inputs.
- Although in many countries efforts are very much male-directed, the role of women in direct agricultural production, food preparation and preservation is increasingly being recognized.

The Bank's financial and borrowing policies, which have made it possible for the Bank to expand its rural development programs, were then explained.

The PIDER Project of Mexico

A project which illustrates how the Bank is implementing some of the newer policy emphases for rural development is described by the PIDER Project. The showing of the Bank's film, "Seeds of Progress," graphically portrayed the life of the campesinos in their struggle to improve their agricultural production and living standards. Emphasis was given in the film to simple improvements in agricultural technology, labor-intensive public works, increased participation of campesinos in decision-making processes, rural industry, rural electrification, improved health and educational services and related themes.

This project is one of the most ambitious and complex national rural development programs supported by the Bank–a 1.2 billion dollar project–for which one-half billion dollars has been spent in the last four years. The principal fiscal procedure is to channel additional investment into micro-regions by improving the administrative operations of its existing planning and execution system. One indication of the significance which the government attaches to the project is the fact that the coordination machinery for the fifteen government agencies involved in the program is located in the Ministry of the Presidency. More specifically the strategy is to:

1. Increase investments and service of existing agencies and direct them toward selected poor, rural micro-regions with productive potential;
2. decentralize planning, and especially execution, so that both are performed at state and local levels; and
3. encourage participation in the planning and execution process in the villages and ejidos (common lands).

To achieve these purposes, extra resources are allocated to agencies for work in poverty areas which have traditionally been bypassed by the normal operations of these agencies. The basic unit for purpose of investment programming is a micro-region comprising two to seven contiguous municipalities within a single state. Approximately 50,000 persons live in any one combination of three municipalities. Thus far, 84 micro-regions in 31 Mexican states are involved in the program. Funds are allocated in accordance with a formula which makes 72 percent available for productive investments and 28 percent for social infrastructure.

Although the "gestation period" of the investments focused most directly on agricultural production has not been long enough to allow a firm judgment on output levels, where the improved extension service is operating, increases in small farmer yields appear to be in line with, or in excess of, appraisal expectations.

Other accomplishments of the PIDER Project cited by Mr. Schumacher include:

- Assured support of the project in the next government.
- Success in coordination of the fifteen government agencies on the basis of micro-region development plan.
- Decentralization of individual agency programs to better meet the needs of low income farmers. An estimated five million persons in 6,500 communities are beneficiaries of these programs.
- Development of a new *esprit de corps* among the staff of participating agencies.
- Improvement in the reporting, monitoring and evaluation systems for programs supported by PIDER.
- Initiation of a long-term effort to reorganize the national extension service. This reorganization is based in part on the experiences of the experimental-demonstration project "Plan Puebla," which is described in the paper by Dr. Heliodoro

Diaz, who was characterized as "one of the principal architects" of the reform effort.

A fuller report on the PIDER program, which provides details on all the foregoing points, was made available to all participants in the conference. This report and the film are available to interested persons who wish to contact the Chief of the Rural Development Division of the World Bank, 1818 H Street, N.W., Washington DC 20433.

Résumé of No. 2

AID's Policies for Education and Rural Development

by Curtis Farrar, *Assistant Administrator*

Agency for International Development

Background

The emphasis on rural poor as a main focus of AID's programs dates formally from the passage of the Foreign Assistance Act of 1973[1], informally from some years before that. The act directed us to focus our development assistance activities on the rural poor of the developing countries. It also specified the kinds of programs that we are to undertake. Before 1973, funds were identified with geographic areas and were classified as loans or grants.

Since 1973 they are categorized in three major elements, and a miscellaneous category: Food and Nutrition, which is by far the largest; Health and Population, and Education and Human Resources. Education is the smallest of the three, amounting to about 10 percent of the total. I do not think this percentage represents a lack of priority for education. To some degree it does represent uncertainty about precisely what ought to be done in the educational field; about what can be effective. But it also is a somewhat misleading figure, because when we look at our programs in health or population or agriculture or nutrition, we find that they contain very large educational elements. While our program labeled "education" is relatively small, much of what we do in the field of education is actually called something else. This is in the same spirit you hear referred to repeatedly; that is, the close relationship between educational activities and developmental activities in other sectors.

In the field of education we have identified four areas in which the agency is concentrating: one of these is, of course, Non-Formal Education. The other three are Educational Technology, Planning Analysis and Finance Methodologies for Education, and a much smaller endeavor aimed mainly at trying to encourage institutions of Higher Education in the developing world to build a more effective relationship between themselves and the development problems in their own countries.

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[1] A summary of the major provisions of a report on policy and administrative actions taken in response to the act cited is appended.

Difficulties of Reaching the Rural Poor

It is not easy to reach the rural poor. We don't know nearly enough about them, about what their perceived needs are, and about the basis on which they choose to take particular actions. Also, when we try to engage ourselves as an assistance agency in helping the rural poor, we find that there are some very difficult choices to make. I won't mention the country, but one Mission in our Agency recently went through what must have been a very discouraging series of events. A project they proposed came in to Washington and was very carefully and sympathetically analyzed. The answer went back: "we think the area in which you have chosen to work is too deprived of resources. Its problems are simply too difficult for us to be able to be of effective assistance." AID missions learn to expect negative reaction from Washington from time to time. So the Mission went to work and submitted another project, and that time the answer went back, "after very careful consideration, you have now selected an area where the people are actually too well off to qualify as poor." I am not questioning the review process, probably both statements were correct; merely illustrating the difficulties. The Mission has since gone to work and developed other programs that have been approved.

Other difficulties of reaching the rural poor include: (1) the problem of dealing with power structures through which resources may be taken away from those for whom they were intended and given to others; (2) the problems which foreign technical assistance personnel have in arriving at accurate understandings of the power structure, organization, interpersonal relations, and other delicate considerations which have to be taken into account in making proper decisions, and (3) the necessity of making choices which must embody the political, moral and cultural values of that country and be acceptable to the political structure of the country over the long term. Another difficulty is the problem of the time which may be required to define needs and work out programs and agreements collaboratively with the people and the government entities involved. This process requires patience on the part of all concerned.

Non-Formal Education

The history of AID's policies and perceptions of the role and place of non-formal education is worth summarizing at this point. Some years ago there was a very clear perception about the importance of non-formal education. The formal educational structure could not move fast enough to meet the development requirements of country after country; the cost of expanding formal education in relation to its benefits was questionable in some countries; and there were serious quality problems. There was the further difficulty, repeatedly felt, of relating the content of formal education specifically enough to the needs of the people so that it would lead them to ways of behavior that would actually improve their economic and social status. It was concurrently observed that much of the education in any society takes place outside the formal education structure. This observation was coupled with the hope that it would be possible to change the content of the "built-in" educational function in ways that would help promote change and development. These perceptions were rather quietly and widely accepted.

Program actions and decisions were taken on the basis of the above perceptions, but with what we know were excessive expectations and some misunderstandings of how non-formal educational methods might be used to foster developmental programs in agriculture, nutrition, family planning and other priority areas. After two or three years of experience with some ill defined projects, AID managers of assistance programs and their host country colleagues reported that the results were not sufficiently positive to continue or expand the projects undertaken. Some concluded that they would go back and start working with the formal school systems again. We now see that this line of thinking grossly oversimplifies the problem of finding appropriate and effective educational methods to involve the participation of the rural poor in developmental activities.

Because so much of non-formal education is embedded in activities that are called something else, it may be difficult for people who are looking across development programs as a whole to perceive nonformal education as having a major contribution to make to development. Perhaps we created the expectation that a country would set up a Department of Non-Formal Education which would proceed to solve the educational problems of that country. That doesn't seem to be happening and probably should not.

Some of these excessive expectations and basic misconceptions about non-formal education are now pretty well behind us. Furthermore, general debate about non-formal education is not really very much to the point right now; instead we should take account of what we have learned thus far about non-formal education from our experiences and those of others, and to get on with the job of applying those experiences more effectively to priority development programs for the rural poor.

Some of the foregoing observations are illustrated by efforts to devise low cost health delivery systems. Comparisons of costs of doctors, hospitals and other services to available governmental resources to subsidize medical programs for low income people, lead to the conclusion that not very much can be done in the way of extending systems of medical treatment. Without underestimating the importance of adequate treatment when necessary, it is clear that conveying information which will influence behavior in areas of health, such as nutrition, personal hygiene and similar areas requiring behavioral changes, relies largely on non-formal educational methods to achieve the goal of helping people lead healthier lives.

In closing, I should like to comment on the importance of finding creative local leaders who are familiar with the political, economic and other complexities, diversities and strengths of their own culture, and who can devise realistic educational and other developmental programs to deal effectively with these variables. My own completely unprofessional assessment of educational experience is that many countries have been influenced enormously by individual personalities—who have uncanny capacity to cut through complex analyses made by economists and other highly specialized persons and to identify the *really important factors* which *must* be taken into account to design effective developmental programs.

Local leaders having these remarkable insights can make enormous mistakes! Nevertheless, leaders with these qualities are right often enough to start the process of change and to act as catalysts for educational systems and means of communication. Although there is no "science" in this approach, the identification of such people, and those with intellectual and financial resources, may be one way of making the kind of progress in the field of education that is so essential for the success of our development programs for the rural poor.

* * *

Highlights of the report of the Agency for International Development (AID) to the Committee on International Relations of the United States Congress on:

Implementation of New Directions in Development Assistance

Taken in response to provisions of the Foreign Assistance Act of 1973 dated July 22, 1975[2]

AID's Policies and Basic Approach to Development

- Programs are concentrated on three key sectors of food and nutrition, population and health and education and human resource development.
- "Projects and programs are especially directed toward reaching the poor majority within the population of these nations." Recipient governments are urged "to design policies and programs to assure that the benefits of economic growth accrue to all the people and not a select few."
- "Private and voluntary organizations are increasingly active, with AID support, in planning, implementing and evaluating development programs which draw upon their unique capacities to reach directly large numbers of poor people."
- Although securing participation of the poor is recognized as being a complex and sometimes slow process, emphasis is given to "programs which involve the poor as active participants in the development process itself, avoiding any suggestion of a handout." More specifically, emphasis is given to policies and programs which assure that:
    1. "The economic benefits are widely and significantly shared by the poor with the objective of narrowing the relative income gap between rich and poor;

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[2] Because of the importance of AID's policies for all programs of development which use non-formal educational methods to achieve their aims, and also because of the severe time constraints on Mr. Farrar's oral presentation to the conference, the editor has prepared highlights of this highly important report as a supplement to Mr. Farrar's remarks. The full report under the title indicated above was made available to all participants of the conference. Many of the policy and operational guidelines noted are reflected in the case studies (funded by AID and other organizations) which are summarized in Chapter 3.

2. "Decisions concerning the activities to be carried out are made, preferably, by those benefited (for example, the poor), or if not, at least with effective consultation and substantial acceptance by those benefited;
3. "The activity in which they participate is, ideally, a learning experience for benefited persons, which increases their technical skills and/or their capacity to organize for common purposes and the greater access to the benefits of development;
4. "The poor make a significant contribution in effort and resources to the activities from which they benefit, for example, through personal savings, or serving as members of local planning or project implementation committees, or through actual project implementation;
5. "The participation and contribution of women should be explicitly taken into account" under the aforementioned considerations, or in other instances where participants are women.

- The task of achieving substantial progress for the billion or more of the very poor in countries receiving AID assistance is seen as not easy, and one which "requires an extremely large investment of resources, long periods of time and very difficult policy choices for governments."
- The very poor are defined in accordance with the following "benchmarks":
  "1. Per capita income below $150 per year;
  2. Daily diet of less than 2,160-2,670 calories, depending on the country, and
  3. Such health indicators as life expectancy at birth of below 55 years; infant mortality over 33 per 1,000 children aged 0-1; birthrates over 25 per 1,000 population; access to broadly defined health services for under 40 percent of the population."
- Priority is given to programs affecting the poor majority in any country which are part of a development approach conducive to broad-based systemic change. More specifically:
  1. "Concentration is given to countries which have development policies which AID can support and which can utilize assistance effectively";
  2. Key components or packages of development are provided, frequently in concert with other bilateral and international donors, which are "designed to involve

and affect broad segments of the poor majority in order to multiply the impact of the assistance";

3. Pilot programs, involving risks, are supported which test "new appoaches with potential for affecting many people, thus encouraging the experimentation needed to advance the art of development."

Policy Issues and Program Choices

Food and Nutrition

A basic issue in the area of food production and nutrition is "whether a small farmer strategy is consistent with our dual purpose objectives of increased food production and greater equity for the mass of rural populations . . . AID strongly supports the small farmer strategy . . . We believe that over the long term the social benefits will be spread much more broadly and food production increased at least as much by emphasizing the small farmer; in the short term, however, there may be significant benefits to the poor if larger farmers have greater immediate capacity to increase production more rapidly [and] if lower food prices result."

Within the policy framework which emphasizes greater attention to the needs and potentiality of small farmers, several key problems and components of assistance are analyzed along with measures to deal with the problems and potentialities. They follow:

1. the basic need for readjusting the main body of traditional development thinking to give greater and sharper focus to the needs of the rural poor;
2. better distribution of available fertilizers;
3. provision of adequate production credit at a fair price, coupled with the recognition of potential savings by small farmers through cooperatives or other farmer organizations;
4. provision of adequate physical infrastructure (roads, irrigation facilities, etc.) scaled to the needs of small farmers, with emphasis on labor-intensive projects;
5. agricultural research which emphasizes the important link between the research and the ultimate intended recipient—the small farmer;
6. transfer of technology (low-cost agricultural implements, etc.) created or adapted to the needs of the small farmer;
7. strengthening local institutions—cooperatives and local

government organizations, to foster and extend participation of small farmers;

8. assistance to national efforts to effect changes in land tenure laws for the purpose of increasing participation of the poor in agricultural production.

Policy and program choices in the field of nutrition are focused on "direct child feeding, food-fortification education, on better nutrition practices like longer lactation or improved weaning foods, or other measures in the nutrition field proper; agricultural or rural development programs that increase and diversify the supply of food available or which stimulate agricultural production so rural incomes rise enough to permit additional food purchases; health and sanitation programs that improve the efficiency of food utilization by reducing gastroenteric parasites and mitigating other diseases; and education programs that touch directly or indirectly on nutrition."

Population Planning and Health

Population planning and health policies and activities for the past ten years have been focused on creating a basic infrastructure and strong manpower base to reduce population growth through:

1. the promotion of "worldwide understanding of the population problem and its impact on development";
2. encouragement of "family planning programs through voluntary national and multinational efforts, and
3. the provision of technical and institutional support for the development of family planning programs."

Current and future programs will give greater emphasis to:

1. expanded family planning information programs, improved administrative and management systems and manpower training;
2. "increased integration with other developmental programs, particularly health and nutrition initiatives in rural and poor urban areas;
3. "increased collaboration with other bilateral donors, the World Bank, UNFPA and WHO"–in part to help meet the rapidly increasing demands for contraceptive supplies."

Education and Human Resource Development

The basic policy posture with reference to education and human resource development is expressed in the following: "In a world of plenty, 'education' may connote literacy and wide learning, truth for its own sake as well as a means of progress. In a world of want, education must unfortunately of necessity be something far more restrictive and practical as a means of improving living standards rather than as an end in itself. AID defines 'minimum practical education' to be that body of knowledge, attitudes and skills necessary to effectively contribute to and participate in a developing society and economy. Education should help LDC citizens to cope with their most pressing problems–hunger, ill health and a lack of productive employment."

- Emphasis is given, operationally, to assistance in the identification of learning needs and the selection of "the most promising alternative means for meeting those needs, including both formal and non-formal programs."
- New approaches are supported "including non-formal learning programs that do not rely on literacy for providing important information to rural people."
- Recognizing that "no easy, quick or inexpensive systems now exist or are likely to be developed"–experimentation must go forward on all fronts in human resource development.

World Bank Policies for Education

by D. S. Ballantine

Director, Education Division, World Bank

As any good professor or teacher will do, your conference director has indicated to us in advance what he wants us to talk about. He asked us to describe, briefly, the general policy and rationale of our agencies in approaching the rural poor and education[1] for the rural poor, to give some examples of projects and then to indicate the problems and issues we have encountered.

I would begin, therefore, with reference to President McNamara's addresses over several years in which he outlined a new policy for the Bank. At the annual meetings in Washington and Nairobi he has talked about the small farmer, about the lower 40 percent poverty group within countries and between countries, and about the special efforts needed to bring the very poor into the stream of development. It followed naturally, I think, that in each sector we would attempt to spell that out and see what effect it would have on our policies and practices as in the case of education. That effort resulted in a policy paper published in December, 1974, which probably many of you have seen, and which—while it did not depart entirely from the old policies we had followed—nevertheless did open up new areas for emphasis. Incidentally, I think when you talk about development for the rural poor you must recognize the excellent work done here at MSU on the contribution small farmers can make to national income and development. I think, particularly, of Carl Eicher whose writing has served as a real inspiration in that respect.

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[1] The Bank's policy position paper on "Education," published in 1974, was made available to all participants.

In effect, what we are talking about is not so much a new educational policy as a new definition of development. One which shifts away from measurement of progress solely in terms of growth; gives increased weight to the distributional aspects; shifts away from the capital intensive, and considers more the labor intensive; shifts away from the urban concentrated, and considers more the rurally dispersed populations, the traditional and transitional elements of society as well as only the modern sector. In other words, a definition which attempts to look at societies the way they are structured and actually function.

The addition of a "poverty and distributive orientation" to the concern for productivity which has characterized Bank policy under McNamara, and characterizes also our approach to education, has resulted in the definition in this paper of four principal objectives that we have in our educational lending. The first is the principle that opportunities for at least a minimum education should be extended to all in the population as rapidly as resources permit and the course of development requires. The second objective is helping to develop the skills needed for a wide variety of development purposes, which also had characterized our earlier, more exclusively modern-oriented approach. Upgrading and expanding skilled manpower is always needed, and we do not intend to abandon our efforts in this direction. Our third objective is to assist countries in improving efficiency both internal, in terms of inputs and outputs in the educational system, and external in terms of the relevance of this total effort to the development objectives of the country. The fourth objective, which in a way overlaps with some of the others, is to assist governments in their efforts to improve equity in the population—to redress some of the imbalances of income, services and participation in development as between rural and urban, as between the sexes, as between ethnic or income groups and so forth. These, then, are the four basic objectives which have tended to govern our lending practices and policies.

As to non-formal education, it is, of course, an integral part of any society's learning system, together with *formal* and *informal*. I am not going to try to define non-formal education, except to add that it is what you do when the circumstances require it, as opposed to formal education which is what you do when the circumstances require *that*. Informal education is a function of the culture, influenced to some extent by government information policies and the media.

In applying non-formal education in a national learning system we should draw the distinction between the school-age group and the adult or adolescent population. And for the school-age population this distinction generally raises the controversial issue of "dualism." By that I mean the suggestion that there are two systems of education in a country—one, the regular formal education taken by everybody who can, that proceeds on up the ladder to more education and, perhaps, modern sector employment. The other is considered a second-best substitute which is terminal, perhaps more relevant, but nevertheless regarded as serving a "second-class citizen." I consider this a false issue, because given the circumstances of many developing countries, especially the poor ones with which we are now concerned, the choice is not between the regular educational ladder and the second best; the choice is often between the second best and nothing.

In the World Bank Education Sector Paper, using the studies made by UNESCO for the Bucharest Population Conference, we have attempted to review the projected trends of enrollment in formal primary schools in different regions of the world. In three out of four regions that we have analyzed, along about 1985 the trend in the percentage of school age population which is not in school is reversed and begins once again to climb. If you take out of each of those regions those countries that have incomes of less than $250 per capita, you will find that the change takes place between 1980 and 1985 and becomes rather more marked than is shown in some of the regional breakdowns. The important thing here is simply a fact which Phil Coombs spelled out in his world crisis book which has been with us for a long, long time. Given the rate of population increase, given the costs of conventional systems of education, given the slowness of GNP to grow, and the tendency of educational costs to escalate, there is simply no possibility in many cases that before the year 2000—or perhaps many years after that—all of the children can be given a conventional primary education, even if that were the best thing for many of them. This is the fact one faces, and that is why I suggest that we may have to arrive at universal primary education in stages.

As far as the adults are concerned, theirs is the most critical and most neglected need. We are all talking about adult and non-formal education these days, but the test lies in the country's education budget. The budgets for adult education are still low, desperately low, and the attention that is being devoted is not in any sense adequate.

A good deal has been said about rural poverty orientation and the role of non-formal education, and I think it can be generally conceded that we have fairly well exhausted the conceptual stage of this discussion. As Curtis Farrar has said, the task now is to get on with it. The Bank Sector Paper speaks of a period of tooling up, as follows:

> This tooling up would embrace not only refinements of project criteria, planning, staffing and acquisition of experience within the Bank; it would also include a many-sided effort within the developing countries themselves to increase their capabilities and prepare for a major thrust to be launched in the later 1970s. It would include: (a) operational research into demographic, social, geographical, and economic conditions related to basic education; (b) development work in curricula, teacher training, institutional models, project design, physical facilities and the use of mass media; (c) planning, policy formation, legislation, and budgeting by government; (d) administrative reorganization and management training necessary to achieve the decentralized, yet coordinated execution, required by a major program; and finally (e) systematic monitoring and evaluation of ongoing operations.

The first job one has in directing attention to the rural poor is learning how to identify the poor. The poor are always with us, yes, but they are not always readily identifiable. This point comes out of an appraisal report that was submitted to our directors just this week, dealing with a project to expand primary education in Malaysia. It offers, at least, one example of an attempt to identify provinces which are most lacking in equal access to educational opportunity.

A good part of the experimentation in non-formal education that we see as needed in the near future lies in the development of delivery systems and I want, this morning, to mention just a few of the experiments in which the World Bank is involved. First, on the question of non-formal alternatives to primary education, we have an experiment and study under way in Mauritania to determine to what extent the Koranic schools can be utilized for modern education that is developmental in character. In Ethiopia, we had agreed to build a school to train the village priests to act as change agents. Unfortunately, that project was aborted by the revolution. The underlying idea of this and several similar experiments is to build on what is there, to use what already has the confidence of people, and to convert it to more modern uses.

In Mali we have a study underway, as we have in four other West African countries, of how to deal with basic education. In Upper Volta we have picked up a project which was first supported by the European Fund, an effort to reach fifteen-year-olds and above with a very practical three-year course which leads into supervised farming and ultimately into independent farming as mature villagers. In Benin (Dahomey) we have an experiment with rural youth groups, the 4-D, involving functional literacy and training in agriculture. In Senegal we are assisting village education centers for adult groups and families. In Somalia we are supporting an effort to reach the nomadic population through the establishment of education centers for both children and adults at the congregation points where the nomads come periodically for various services.

For adults, projects frequently assisted by the Bank are the farmer and rural training centers, mobile training units, the general, multipurpose community learning centers and the mass media, all of which are for non-formal education. We are supporting various aspects of language development ranging from the making of language profiles to the production of reading materials in local languages. In Tanzania, we have a very interesting effort to train something like 20,000-25,000 village managers. Building on the excellent software development done by a Nordic group, we are assisting a crash program to train three people in each village to lead the cooperatives, to act as weighmasters, bookkeepers and the like. What these diverse examples reflect most is the diversity of situations calling for non-formal education and the great variety of possible responses to these needs.

Dick Niehoff has asked us if we would comment briefly on some of the problems we have had and the issues we have had to face in formulating and administering the Bank policy. The first one, I think, and the most important for all of us, is learning how to think about education. My point is best made by the following story: A man walked down the street one night and came upon a friend, down on his hands and knees underneath the street lamp, looking anxiously all around. "What are you doing?" he asked. "I'm looking for my wallet," the man replied, "I dropped it when I got off the bus a minute ago."

"But," the first man said, "the bus doesn't stop here, it stops down the street." "I know," said his friend. "Then why are you looking here?" "Because the light is better."

We have all been looking and working where the "light was better," where the rules and the criteria were better known. And, we are all embarked now into a murky, dim area where we suspect or hope the real thing may be. How then to seek? One suggestion is that if you want to think about education, don't begin by thinking about education! Ask yourself–and I'm speaking now to the member of the country responsible for its policies–ask yourself what kind of a society you want and envisage realistically, say twenty years from now. What do you want it to become? What are your development objectives? Then ask yourself what kind of people will it take to generate and operate that kind of society? What is the difference between those people and the ones we have now? And, finally, what kind of education and training would we need in order to develop the people we have now into the ones we will need then? In other words, only by going about it backwards can one move forward.

It is a cliché we all practice that "education is a part of society." Every student who goes through a school of education is taught that. But when they come to work on educational systems, educators too frequently lose sight of the context within which education takes place and assume that certain characteristics of formal systems are immutable. It is a little as if, in designing life support systems for astronauts walking on the moon, we neglected to ask about the force of gravity, the amount of oxygen and the temperatures on the moon.

Part of the "tooling up," which is the second problem we have indicated for ourselves, is the study and evaluation of examples such as I have mentioned. But another area of prime importance for all parties concerned–universities, aid agencies and governments–is the development of a sound data and analytical base. I suspect that the data you need, the questions you ask, and the kind of analysis you do as they affect population, nutrition, education, training, employment will overlap significantly, and that if we could make a more concerted effort to develop commonly needed data we would save ourselves a lot of time, trouble and money, and we would also move faster. If we are to look at the target groups of the population and the development objectives, we have obviously got to know more about demography, social structures and cultural characteristics.

We have spoken of decentralizing planning and management, and I refer to our project in Tanzania, the effort to train village managers as an example. That capability obviously has to be improved and upgraded on both the technical and the management level.

We have spoken also of the need to utilize existing structures. I have always been struck by the question put by Arch Callaway, whether it is better to teach the son a new technique and let him go home to his father who will promptly "put him down," or to teach the father that technique and let him pass it on through the established channel of father/son relationship. Could not many of the existing and traditional relationships be used more effectively than they have?

Have we made a mistake in trying to pile too much into the school curriculum, albeit in a perfectly laudable effort to make it more practical and useful? Are we piling too much on and not utilizing existing resources for development by too much concentration on the school? And, here let me speak a word of caution. What Callaway was talking about was informal education as much as non-formal. The only intellectually satisfying and ultimately practical way to approach this dilemma of limited resources and relatively unlimited needs is to view all aspects of learning as a whole.

Finally, as I look at this whole picture I come back to the point where I began, that national resources and resources from outside cannot begin to solve these problems in the conventional way. I come back to what more and more countries seem to be talking about and that is self-help. For the agenda of the future, all of us have to explore much more fully the possibilities of self-help, as opposed to government-directed, donor agency-directed or some other type of direction which involves budgets and money and quantitative resources. What can local communities and regional governments do for themselves—perhaps better than central governments? What can national governments do to minimize the need for reliance on external aid and what can external aid do to encourage and maximize the success of all levels of self-help?

Chapter 4

Non-Formal Education in Rural Development Projects

Editor's Note

Programs to increase agricultural productivity, increase health standards, improve local governments and administration, extend family planning practices, or other programs designed to improve living standards of the rural poor may be essentially "single purpose" projects or "comprehensive" projects (sometimes referred to as "integrated") which include two or more of the programs. There appears to be experiential evidence that comprehensive programs, whether started as such or evolved through interaction with rural people or groups, are more flexible and responsive to the needs of rural people. Furthermore there is some evidence to support the belief that the components of a comprehensive program are mutually reinforcing in their impact on individuals and groups of rural people. At this stage in the art of devising and administering comprehensive rural development programs, most of them are essentially experimental in nature.

The comprehensive rural development programs in Bangladesh, Ethiopia and Mexico which are described in this chapter have the following important characteristics in common:

- They are experimental demonstrations operating in prescribed laboratory or pilot areas but have influenced changes in rural development policies and practices in the nations in which they operate and to varying degrees beyond.
- The programs have all evolved in the closest collaboration with the villagers served and compatibly with their customs and social organizations. The clientele of all projects are the "poorest of the poor" in their countries.
- They all use extensive non-formal educational methods and local leaders and paraprofessionals in the administration of their programs.

- They have all been in existence for approximately ten or more years and two of them have survived civil wars. Their programs have *evolved* naturally on the basis of results achieved and problems encountered without undue pressure to meet "crash" imposed goals.
- All three have been adequately or generously supported by their governments and by three different external agencies for the initial periods of their existence, largely for foreign exchange costs, advisory technical assistance, staff development and research.
- A research documentation and evaluation component has been built into the normal operations of the projects with extensive publication of research findings and program results.
- All three have dealt with *priority* problems of food production, credit, marketing and other food-related subjects and, in varying degrees, have programs for women, family planning, youth, health services, public works for rural infrastructure and other areas designed to improve living standards.

Résumé of No. 4

Non-Formal Aspects of the Comilla (Bangladesh) Project

by Syed A. Rahim

The Comilla Project began in 1959 as an experimental rural development project under the auspices of the Academy for Rural Development.[1] The project was born at a time when the government and the people in the country had become dissatisfied with the existing rural development programs and activities.

Acting on this dissatisfaction, a small group of senior government officials, scholars and practitioners, plus invited American scholars and advisors, devised a "scheme" for the creation of two Academies for Rural Development, one in the West Wing of what was then Pakistan, in Peshawar, and one in the East Wing, located at Comilla. The scheme specified that the initial core staff at each of the academies would consist of ten social scientists who would attend a one-year seminar at Michigan State University,[2] while physical facilities were being built for the academies, to prepare themselves for their research and training tasks.

The Comilla Academy staff was led by Akhter Hameed Khan, a former member of the prestigious Indian Civil Service, who was a well-known educationist and administrator. A first task which Khan undertook upon return to Comilla was to secure permission from governmental authorities to establish the Comilla Thana as a pilot laboratory (in 1960) for experimental demonstrations in aspects of rural development such as local self government, cooperatives, agricultural credit and extension, rural business and rural education. The main strength of the Comilla project was that it emphasized organizing rural people around technological innovations, supported by elaborate non-formal educational activities.

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[1] The rural development project in Bangladesh (formerly East Pakistan), familiarly known as the "Comilla Project" is well documented. One of the most comprehensive, which provides a documented account of the first ten years, is authored by Arthur F. Raper under the title of *Rural Development in Action: The Comprehensive Experiment at Comilla, East Pakistan*, Ithaca, New York: Cornell University Press, 1970. Conference participants were also provided with reprints of two articles authored by Akhter Hameed Khan, the first and distinguished Director of the Academy for Rural Development who organized and directed the Comilla Project for more than ten years. These articles are: "My Lessons in Communication," published by the East-West Center, Honolulu, Hawaii, and "Reflections on the Comilla Rural Development Project," published by the Overseas Liaison Committee of the American Council on Education, Washington D.C. March, 1974. References to the contributions of the Comilla Academy to the "Rural Works Programme" by A.M.S. Ahmad are also summarized in this report.

[2] The decision to staff the academies with social scientists was based in part on the assumption that skilled technical personnel in agriculture and other rural development fields were available, but that innovative measures needed to be devised with technical development personnel to get more widespread adoption of progressive practices.

The Setting of the Comilla Project

The Comilla Thana is one of 413 thanas in Bangladesh. During the British colonial period the thana, with the police station as its center, was the basic unit of law and order administration. After independence in 1947 the concept of the thana gradually changed as the government administration became more oriented toward development administration. Various departments of government (agriculture, education, health, etc.) set up their offices in the thana in order to come closer to the rural population. An officer of the civil administration (called Circle Officer for Development) was placed in the thana to act as the government's representative and to coordinate the activities of other departments. In the late fifties a new institution was added to many thanas in East Pakistan. It was the block office of Village Agricultural and Industrial Development Program (V-AID Program)–the community development program in Pakistan. This new office with its village level workers was responsible for multipurpose rural development activities. Through these offices, particularly the V-AID Program, the government was able to reach some sections of the rural population with information, services and supplies. But the intensity and quality of the activities of those offices was not sufficient to make notable impact on the rural life. The activities were uncoordinated, the rural farmers and artisans were unorganized, and the links between the rural people and the government offices were weak. There were very few systematic efforts at educating the rural population about new ideas, methods, and techniques of economic production and social organization.

These organizational arrangements and development activities were preceded by much earlier efforts by the British, going back to the late nineteenth century. But no previous efforts produced satisfactory results, partly because of the very difficult handicaps briefly summarized in the following: (1) average farm size was about 2 acres, (2) per capita annual income of less than U.S. $50, (3) 80 percent illiteracy, (4) life expectancy at birth about 48 years, (5) morbidity and infant mortality rates very high, and (6) population density among the highest in the world.

The mosques and the madrassa (religious schools) are the traditional educational institutions. Public schools are not numerous (one elementary school for every three villages—about 5,000 population); the teachers are untrained and poorly paid and the dropout rate is very high. There was little or no direct contact between villagers and government officers at the thana headquarters, who generally worked through middlemen (traders and moneylenders) and the village elites.

The government's approval of the Academy's request to establish the Comilla Thana (an area of approximately 100 square miles) as a development laboratory included permission to conduct experimental projects addressed to the above named and related problems, mostly with local resources and in collaboration with government officers. The documented results of the experiments and demonstrations would be made available to the government and would be used for the training of officers responsible for rural development activities.

THE OPERATING PRINCIPLES, INSTITUTIONAL FRAMEWORK, AND MAJOR PROGRAMS

Operating Principles

The Academy did not start with a complete plan for the project. It began, rather, with a general set of ideas and principles from social science theory and research and from an analysis of actual conditions in the Comilla Thana, which was painstakingly secured through observations of rural conditions and discussions with village leaders and village groups. These data formed the background for the initiation of remedial programs. More specifically, the main operating principles adopted by the Academy staff for the guidance of their work were:

First, that the project should be based on sound economic principles: savings, capital formation, planned investments, technological innovation, cooperation, and modern accounting and management. The emphasis should be on increasing production and income of the participating families in the villages. But in that process the poorer sections and the disadvantaged groups of the rural population should not be neglected. Best use should be made of the traditional wisdom and locally available resources including the surplus labor in the villages. To that end, the economic activities should be labor intensive rather than capital intensive.

Second, that a new institutional framework should be developed to facilitate intensive interaction between the project staff and the rural people. It should ensure a constant two-way flow of ideas and information between the village and the project office.

Third, that the information-education activities should relate to the specific and immediate problems of the village, and at the same time focus on broader long-term concepts and issues of rural development. Thus, education on how to make good use of a specific loan and of farming techniques should be imparted in a broader context of education on the principles of capital formation and technological innovation.

Fourth, that the villagers should organize themselves into voluntary disciplined groups so that they could pool some of their resources, make democratic decisions affecting the whole village, efficiently manage joint activities, and learn new ideas and practices together. The villagers' participation in organized activities should not be limited to only the village level. Their representatives should also participate in the decision-making process of the central project organization.

Fifth, that the project officials should work as teachers and guides, rather than official supervisors, and should themselves practice the principles they promote for the villagers.

Institutional Framework

The Academy started its operations within the political-institutional framework for local government known as "Basic Democracies" which was introduced in 1960 by President Ayub. The Basic Democracies system was based on a four-tiered hierarchy of organizations which included: (1) the *Union Councils*, made up of six to nine members called "basic democrats" elected directly by the people to perform both civic and developmental activities, and (2) the *Thana Councils*, made up of the chairmen of the Union Councils and an equal number of government officers, who had responsibility for planning, coordinating, financing and supervising the activities of Union

Council. (The two higher tiers were at District and Provincial levels). The Academy worked with the elected and official members (government officers) of the Union and Thana levels of the system, in ways which will be described later, and evolved an organizational unit called the "Thana Training and Development Centre" which survived later political upheavals and a civil war.

On the economic side, the Academy developed a system of multi-purpose cooperatives which were based within the framework of established cooperative acts/regulations administered by the Department of Cooperatives, but which, prior to the Academy's employment of more rigorous operating principles, had not been notably successful.

Main Program Components of the Comilla Project

Cooperatives

The agricultural cooperatives are small, voluntary societies organized at the village level and consist of 30 to 60 members, most of whom are land-cultivating farmers. Each cooperative is administered by elected managing committees which include the chairman, the manager and a model farmer. The *chairman* is usually a respected, influential village leader; the *manager* an active trustworthy person having time and interest to carry out managerial functions and to receive training at the Thana Cooperative headquarters; and the *model farmer*, who is a good cultivator, interested in learning improved practices and willing to help others adopt new practices. The Thana level organization of agricultural cooperatives is a federation of these village cooperatives (ACF) which is managed by a board of directors elected by the village coops. The day-to-day administration of the ACF is carried out by an appointed professional staff headed by a director.

In addition to the federated agricultural cooperatives there is another federation made up of "Special Cooperative Societies" of weavers, potters, traders, rickshaw pullers, butchers and others. These organizations of agricultural and non-agricultural cooperatives are again federated in an apex level organization called the "Thana Central Cooperative Association"–the TCCA. The managing committee of the TCCA is composed of elected representatives of the constituent organizations.

The members of the primary societies accumulate capital through weekly thrift deposits pooled and credited in an account of the Cooperative Society. Each member maintains the ownership of his capital (and can withdraw it) but the aggregations are used as a basis for loans to the primary cooperative on the basis of village production plans, purchases and other development purposes and services. The land or other means of production and labor, however, are not pooled.

The primary cooperative sets its objectives, prepares production plans, receives loans, supplies and services for distribution among the members. The land, or other means of production, and labor are not pooled. Each member operates his own farm or the special trade in which he is engaged. However, certain innovations introduced by the project require joint action and management. The cooperative society organizes joint activities and remains responsible for funds, equipment and materials used for those activities. Examples are power pumps for irrigation and motor vehicles for transportation services.

The staff of the Academy is tied into all these operations through participation in the extension non-formal training activities which are involved in all the functions described and in advisory and research activities related thereto. By convention, the director or a senior member of the Academy has been, until recently, elected as chairman of the TCCA–the apex organization of the cooperatives.

Thana Training and Development Center (TTDC)

The TTDC is a new thana level organization for rural development conceived by the Academy, first demonstrated in the Comilla Thana and later adopted throughout the province as the basic organization for coordination and integration of the work of the various agencies involved in rural development, training and education. The Centers have buildings for the officers, the Thana council, and the cooperative federations, thus creating a *campus* of rural development institutions. The villagers come to the center to attend training and demonstration classes, and to get information and services from the government agencies. They get the services at one place and can easily see the government's efforts at rural development. The pool of thana level officers at TTDC forms a team of teachers and instructors of rural development.

The Women's Program and Other Special-Group Activities

The Academy's project made special efforts at organizing and serving important village groups not directly covered by the cooperatives.[3] These are village women, youths, adult education teachers and the *Imams* or religious leaders. The objective of these group activities is to involve the groups in development by teaching them how to be more effective contributing members to their families and communities.

The program organizes regular training and demonstrations on home gardening, poultry raising, sewing, spinning, silkscreen printing, health and sanitation, child care and maternity, family planning, youth activities, teachers' training and so on. Organized groups of farmers' and landless laborers' wives, village midwives, school dropout youths, adult school teachers, and the *Imams* are brought to the *Abhoy Ashram* for orientation courses. Then their selected representatives continue to attend weekly or fortnightly meetings and training sessions at *Abhoy Ashram*, and in turn arrange meetings at the village. The program operates on the same principles as the village cooperatives.

Rural Public Works

The Rural Public Works program was briefly described by Dr. Rahim, but is not abbreviated here because of the more extensive treatment of this important subject by Mr. A. M. S. Ahmad which is found on page 206.

The scope of some of the major activities briefly described in the above is indicated in the table of statistics on page 61.

NON-FORMAL EDUCATION IN THE COMILLA PROJECT

The Purposes

The main purpose of nonformal education activities in Comilla project is to prepare the rural men, women and youths for a new and better style of life in their families and communities. The emphasis is on joint and cooperative action for solving the basic problems of agricultural production, employment, health, nutrition and family planning. The aim is not just to impart knowledge and skills in one-shot intensive training courses, but to make training a continuous process week after week as the rural people become involved in the rural develop-

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[3] See also Naseem Hoque, *Nonformal Education for Women in Bangladesh*, Supplementary Paper No. 5, Program of Studies in Nonformal Education, Michigan State University, East Lansing, Michigan.

STATISTICS SHOWING SIZE AND PERFORMANCE OF COMILLA PROJECT

	1962	*1968*	
Agricultural Cooperative			
Number of societies	59*	261*	
Number of members	2,474*	15,454*	
Non-Agricultural Cooperatives			
Number of societies	11*	78*	
Number of members	614*	3,936*	
Total savings and share deposits of all societies (in Rupees)	40,832*	1,452,378*	
Total loans issued to all societies (in Rupees)	238,664*	11,384,325*	
Total repayment of loans (in Rupees)	60,162*	6,011,302*	
Total number of villagers trained at Abhoy Ashram	142	970	(in 1965)
Total expenditure in rural works, irrigation and rural electrification (in Rupees) for the period 1962-66			4,142,952
Distribution of birth control contraceptives (in dozens) Total for the period 1964-67			118,135

***These figures are cumulative.**

ment activities. Training is an integral part of the continuous process of development. It does not end with a fixed course or a diploma or a certificate of completion.

The nonformal education process in Comilla is closely integrated into the other components of development process: rural economic and political organizations, diffusion and management of technological innovations, research and evaluation and in-service/pre-service orientation and training of government administrators, managers and field workers. The educational activities are built around development problems and needs, identified through interviews and discussions with the rural people and the rural development practitioners. Therefore, the purposes of nonformal education can be better understood if seen in the context of the broader development purposes. In Comilla, the focus of development is undoubtedly on material development, to lifting the rural people from a desperate condition of poverty and ignorance. Accordingly, education is more functional in an economic sense than ideological or value oriented.

Participants

References have already been made to the large variety of persons who participate in non-formal educational activities sponsored by the Academy (and the organizations it has brought into being), such as farmers of small and medium-sized holdings (2-7 acres), landless laborers, village artisans, non-agricultural workers and members of counsels. Others who have not been previously mentioned include primary school teachers, village doctors, paramedics and midwives, religious leaders and rural youths, particularly school dropouts, village artists and singers, irrigation pump drivers, tractor drivers, mechanics and others, all of whom contribute to that complex mosaic called "rural development."

Non-Formal Educational Processes

As indicated before, non-formal education is an integral part of the development activities undertaken by village groups. The process of education continues throughout the life cycle of most of the specific projects and is illustrated by the following description of the typical procedure: The normal pattern is that the learning groups meet one day a week or a fortnight at *Abhoy Ashram* or in village centers. They attend lectures, participate in discussions and practical demonstrations for several hours. Part of these "meetings" are used for conducting various businesses relating to the project or scheme. For instance, the cooperative manager brings weekly savings to deposit in the bank, processes the "production plan" and loan application with the Cooperative Inspector, and procures supplies and services requisitioned by his cooperative society. The village woman attending classes at *Abhoy Ashram* also obtains medical services and supplies for herself and her children from the clinic operated by the Women's Program. Sometimes it is hard to distinguish between educational and business activities because they are so much interdependent. It is fair to say that they are two aspects of the same process of learning for development. The participants spent half a day or a full day every week or fortnight in that learning process. But it is not compulsory for them to spend that much time. They can stop attending for some time, or drop out altogether when they find it not relevant or useful anymore.

The lectures and discussions are frequently supported by method and result demonstrations, charts, films and other audio-visual aids, such as flash cards, posters, picture stories, slide and audio tapes. A monthly newspaper is published and distributed among cooperative members and other participants. Village singing teams also go around markets and villages giving performances of traditional songs, intermixed with messages about agriculture, family planning and other projects sponsored by the Academy.

The weekly meetings at the *Abhoy Ashram* for managers, model farmers and other elected project leaders are followed by weekly meetings in the villages for cooperative members and others, in accordance with projects in which they participate. In these village meetings, the manager or model farmer, or other activity organizer, explains what he learned in that group meeting at *Abhoy Ashram*. He answers questions when possible, and takes other questions and problems back to the *Abhoy Ashram* meeting the next week for discussion with the various government officers and Academy instructors who attempt to provide suggestions to be transmitted back to the village groups. The process is *continuous*, without diplomas, certificates or other formal recognition. What is learned has its own reward.

Pre-Service and In-Service Training of Project Officers

In addition to the training of cooperative managers, model farmers and other "front line" participants in the development process, the Academy faculty conduct short courses for cooperative inspectors, project supervisors and Thana level officers of the Agriculture, Irrigation, Family Planning, Health, and other departments of government. The focus of these courses is on reorienting and preparing the officials, and updating their technical knowledge and information, for their new role as teacher and guide of rural leaders and groups.

The Teachers and Trainers

As already mentioned, the managers, model farmers, other organizers of village activities, cooperative inspectors, project supervisors, thana level officers and the faculty members of the Academy contribute as teachers and trainers at different levels of nonformal education in Comilla project. Most of these people are not professional trainers or teachers, but, teaching in a nonformal setup is one of their major functions. Some of them receive elementary training on teaching methods, and develop abilities through practical experience. The quality of the nonformal education in Comilla depends considerably on their individual abilities and experiences.

Effectiveness and Cost of Non-Formal Education

A detailed analysis of the effectiveness and cost of the Comilla project is beyond the scope of this paper. It is difficult to separate the effect and cost of nonformal education from other aspects of the project. However, an attempt is made here to indicate broadly the nature and extent of effectiveness and cost.

In broad terms, the impact of the Comilla project on the cooperative villages of Comilla Thana is substantial and clearly visible. By 1968, the project had an enrollment of 15,000 members in 339 cooperatives. The members' accumulated capital in savings and shares is about US $250,000. Since 1960 they have received about two million dollars as short-term loans, and have repaid 60 percent of that amount. The agricultural cooperatives are operating 128 irrigation pumps and tube wells to irrigate about 4,000 acres of land. Almost the entire irrigated area is under high-yielding new varieties of crops. The very high rate of adoption of improved practices has changed the cropping pattern and doubled the production of rice in Comilla Thana. The transportation and marketing facilities have improved. The villagers' access to education, health and family planning services has also improved greatly.

The economic impact of these changes is reflected in the levels of income and consumption of the cooperative farmers. A survey conducted by the Academy shows that during 1963-70 the real per capita gross income of the cooperative farmer in Comilla increased at an average annual rate of 22 percent compared to 13 percent in a neighboring thana that had no cooperatives. The rate of expenditures on agricultural production and non-food consumption have also increased proportionately. On the whole, the cooperative farmers in Comilla are working harder and enjoying a better standard of living than those not involved in the project.

On the cost side, the Academy and its project is not an inexpensive operation for a poor country like Bangladesh. During the period 1960-68 the Academy received a total government appropriation of Rs. 11.3 million or US $2.4 million. The average annual appropriation budget (capital and current expenditure) is US $300,000. The Academy also received a total Ford Foundation Grant of US $1.9 million for advisory services, buildings, library supplies, staff training and project support. Of this amount, US $810,000 was for direct project support.

The Academy is a national training and research institution. Every year the Academy conducts training courses attended by several thousand government officials from all over the country. The major part of the Academy's expenditure is on those national level activities. The proportion of the Academy's budget accounting for direct support to the project will be around 10 percent. In addition to this amount and the Ford Foundation grant, the project has its own income from interest on loans and sale proceeds from services and supplies. Also, there are some additional small grants from government agencies for specific activities. Altogether, the average annual cost of the Comilla project is in the order of US $200,000. Assuming that at least 50 percent of the population of Comilla Thana benefit from the project, the per capita cost comes to US $2 per annum.

The effectiveness of nonformal education can be judged from the diffusion of information and knowledge of new ideas and practices and their adoption by the rural people. This is particularly significant in agriculture and family planning. In 1960 very few people in Comilla knew or practiced improved methods in rice cultivation. But the situation changed dramatically as the Academy introduced mechanized irrigation, new high yielding varieties of seed and intercultural practices. By 1968, one or more of these improved practices were being used in about 80 percent of the land under rice cultivation. Similarly, knowledge of modern contraception became common among the male and female population in Comilla. In this case, however, the rate of adoption of contraceptive methods was not as dramatic as the case in agriculture.

The effect of nonformal education is widespread, if judged against the simple criteria of increase in the level of elementary knowledge and acceptance by the people of new ideas and practices promoted by the Academy. Sample surveys conducted by the Academy consistently show increasing trends in knowledge and opinion, particularly among the members of the cooperatives. But the effect of nonformal education is less significant, and restricted among a fraction of the rural participants, if one considers the quality and depth of knowledge and technical information. A small percentage of rural participants, about 10 percent, acquired a high degree of knowledge and skills and applied them in their day-to-day activities. A group of Japanese agricultural experts working in Comilla villages noticed this clearly. In their opinion, about 10 percent of farmers with whom they worked acquired a very high degree of skill in rice cultivation under the conditions in Comilla.

The nonformal education activity in Comilla is not a very costly operation, because the methods used are simple, and the teaching staff is drawn from thana level officers of government departments and project officials. If we take one-third of the salaries of these part-time teachers, add half the travelling allowance paid to village participants coming to *Abhoy Ashram*, and all the costs of teaching material and communication support, the average annual cost will be in the order of US $30,000. This amount is 15 percent of the total project cost. Using the figure of number of participants attending the *Abhoy Ashram* and village training classes, the average annual cost per participant is about US $5. The cost per participant attending only *Abhoy Ashram* classes is about US $30.[4]

Expansion of the Comilla Model

The most important current rural development program in Bangladesh is the Integrated Rural Development Program (IRDP). It is based on the model evolved in Comilla project.

The rural works and TTDC models were adopted as national programs in 1963. The two-tier cooperative model was first introduced in three different thanas in 1963, and all the 20 thanas of Comilla district in 1965. In 1970 a national program for phased introduction of cooperatives throughout the country was included in the fourth five-year plan of Pakistan. The implementation of that program began rapidly, but was disrupted during the Bangladesh liberation war in 1971. The Government of

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[4] These figures are low compared to the figures of cost per trainee per course reported in Philip H. Coombs and Manzoor Ahmed, *Attacking Rural Poverty: How Nonformal Education Can Help*, Baltimore, Md.: Johns Hopkins, University Press, 1974.

Bangladesh announced its new rural development policy in 1972, which gave high priority on IRDP. The rural development sector of the first five-year plan of Bangladesh includes projects for works program, TTDC, establishment of two new regional Academies for rural development, and introduction of two-tier cooperatives in 150 thanas.

The Integrated Rural Development Program conceived in the Comilla project gave strongest emphasis on the interconnections between components of the program—rural works, thana training and development center, cooperatives, education and training of women, youth and other village groups. Different government and private agencies were involved in the planning and coordination which was difficult, but it could be managed because of the small size of the project and the leadership of the Academy.

But in the expanded setting of the national program, those problems have been greatly magnified. The three main Ministries and their affiliated departments—Agriculture, Rural Development and Education—seem to be in constant conflict over the allocation of funds, jurisdiction and sharing of responsibilities and rewards. Scarcity of funds and other resources is another serious constraint. The inevitable result of these problems is that the IRDP has been threatened by bureaucratic centralization at the national level and poor implementation at the rural level.

A number of studies and field surveys have noted serious weaknesses and problems in IRDP. These are briefly discussed in the conclusion of this paper.

The most common finding is that the village level organizations of IRDP cover about one-third of rural families even in those areas where the program has been continued for several years. The farmers owning large or medium-size landholdings and the rural traders and contractors predominate the membership. The control of village organizations is mostly in the hands of rural elites, who are also most benefitted by the program. They capture the scarce goods and services supplied by the government to the rural population. Most of these goods and services are subsidized by the government so that the poor people can take advantage of them. But, because of inequitable distribution the subsidy goes to the more prosperous class of people who control the cooperatives and union councils. Thus, with the increase of production, economic inequality in the rural area increases, and class polarization intensifies. The rural elites are primarily interested in scarce goods and services. Control of these makes them more powerful in manipulating rural economics and politics. By distributing goods and services to the poorer section of the population, they can earn a profit as well as strengthen political control over them. The thana level officers also find it profitable and convenient to work with these people. Consequently the nonformal education activities are neglected or maintained as a facade to cover exploitive business activities.

Nonformal education is also weakened due to lack of trained thana officers, poor management of the TTDC, lack of educational materials and mass media support. The national office of IRDP has inadequate provision for these essential services. The department of education has no effective program for nonformal education in IRDP areas. There is no special radio broadcast program in support of nonformal education of IRDP. Comprehensive, practical planning for national nonformal education is absent, and therefore, allocation of funds is inadequate.

Finally, there is a serious shortage of funds for rural works and completion of buildings and other facilities in TTDC. These were financed from PL480 grants from the United States. A drastic reduction in the flow of aid money has created a serious problem. The government of Bangladesh has not yet found an alternative way of mobilizing resources for these activities.

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Addendum

Dr. Akhter Hameed Khan, former Director of the Academy, and now Visiting Professor of Agricultural Economics at Michigan State University, was invited but could not attend the conference. At the request of the Conference Director, he prepared the following materials on "A Review of the Extension Principles" (nonformal education) followed at Comilla. His review of extension principles follows.

A Review of Extension Principles

by Akhter Hameed Khan

Professor Niehoff wants me to recount the Comilla experience because he regards it as useful. To me, after my retirement, it seems remote. We started our experiments in 1960. At that time there were several programs of what is currently called nonformal education. Of these, agriculture extension and community development were considered extremely important for the rural people. Both programs had their dogmas, whose exponents, local directors or foreign advisors, were intolerant of deviations. However, as researchers we were allowed, in our pilot projects, to make some alterations. I shall very briefly review the principles of the two orthodox doctrines and our little deviations.

In our country most villagers were farmers, and for pressing reasons our government was anxious to make them more productive. To reach that goal, our experts believed in the American model of agricultural extension. They assumed that scientific methods, far superior to native practices, were available. The new technology had simply to be spread around. For propagating it, the experts wanted to post extension agents or agricultural assistants in the villages. The assistants were under instruction to first gain the approval of "natural leaders," whose example, it was supposed, will be quickly followed by the peasants.

Community development, also American sponsored, co-existed with agricultural extension. There were some differences between the two teaching systems. For instance, community development advocates, mostly sociologists, criticized the narrowness of technicians and insisted that a comprehensive approach was essential for real rural uplift. Better farming, they argued, succeeds not precedes the improvement of minds, bodies and behavior of farmers. Instead of a single expertise, community development gave to its village level worker a multifarious role as technician, educator, supplier and organizer. While agricultural extension highlighted crop demonstrations through progressive leaders, community development stressed common projects through committees.

But, beyond the sibling rivalries, there was profound agreement. Community development like agricultural extension placed full confidence in an official village worker as "change agent," "catalyst," "motivator" or "mobilizer." Like the agricultural assistant the C.D. worker was also instructed to operate through the natural leaders, i.e., the landed gentry. This outlook was in consonance with colonial conventions. Fifty years ago, much in the same manner, imperial administrators had started their rural reconstruction by nominating officials and the gentry as guides, philosophers and friends of the peasantry.

After a decade of exertion, neither agricultural extension nor community development had obtained the desired results. Peasants were far from modernizing their methods. Eagerness for amenities was not matched by increased output. There were indeed sporadic projects, but little popular participation. Only now and then did much altruistic talk soften conflicts or lead to united action.

As researchers we tested the following four premises of agricultural extension and community development:

1. Ignorance of the peasants is the principal reason for their backwardness.
2. An official village level worker (V.L.W.) can put an end to this ignorance.
3. The village level worker can make the local gentry into exemplars or progressive models, and the peasants will follow them out of loyalty.
4. Precipitated by an official "catalytic" agent, all villagers can form into a community for the sake of development.

Our investigations proved that none of these premises fully comprehended the character or operation of the rural reality.

1. Ignorance or lack of awareness was not always the principal cause for non-acceptance of new methods. On the contrary, too often there were physical, social or economic impediments. As an example, in our area, flood control and irrigation were necessary preconditions for modern agriculture.

2. Faith in an official village level worker was not well-founded. He was neither a reliable teacher nor a trusted organizer because of two grave handicaps: he was a transient outsider in a closed society, and too frequently his know-how was inadequate. Moreover, while information may be enough for

solvent landowners, it was not enough for tiny cultivators. The former could, as enterprising individuals, follow the V.L.W.'s advice; the latter could only rarely do so without group organization. Obviously for peasants an institutional infrastructure was another precondition which the V.L.W. could scarcely fulfill.

3. Neither was the faith in the gentry as exemplars and progressive models fully justified. Their power was derived from rents, usury and trade. They no doubt dominated the peasants, but there were few bonds of loyalty or affection. It was convenient but sterile to operate through exploiting leaders, to expect the rich to work for the benefit of the poor, or to expect the poor to become like the rich.

4. Under such circumstances, an official worker collaborating with the village gentry could secure only limited results. He persuaded many substantial farmers to adopt improved practices, or initiated well-subsidized projects. But he could not educate or discipline the far more numerous subsistence farmers. He failed to transform them into productive and harmonious groups. Even after more than a decade the conduct or condition of the retarded majority remained almost unchanged.

As a consequence, we introduced several alterations which have been described elsewhere.[1] Recounting will be tedious. However, I may briefly mention three structural changes in the extension-education system.

1. The setting up of an institutional training and development center, with a composite team of departmental experts, and a regular routine of meetings and workshops for delegates from village groups.

2. The formation of a group in each village and the feedback by every delegate to his group members in regular meetings, corresponding to the pattern at the Center.

3. The organization of small farmers, for their special advancement, into village cooperatives federated into a central association, and the selection by the members of each cooperative from their own ranks and class, of a manager and a model farmer for learning at the Center, and in turn, educating the group.

The framework at the Center combined the functions of educating, organizing and supplying for one *thana* or sub-district, an area of about one hundred square miles. The Center's building was erected in the headquarter town and housed all services and supplies. Every department posted an official at the Center. Together they composed a coordinated and trained team of experts controlling a wide range of services. They collaborated with the local self-government council and the cooperative federation which were also located at the Center.

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[1] "Reflections on Comilla Projects," Wash., D.C.: Overseas Liaison Committee, American Council on Education, Paper No. 3, March 1974, and "My Lessons in Communications," Honolulu, Hawaii: Communication Institute, East-West Center, 1975.

The institutional structures at the Center were linked with the institutional structures in the villages. Straight lines of communication were established through weekly visits of the group delegates who dealt directly with the departmental experts, and carried instructions or supplies back to their groups. Thus the experts, as teachers or distributors, and the delegates, representatives or agents took over the functions of the V.L.W., an expensive and ineffective middleman, who was no longer required.

The peasants could not, without unionization, protect themselves from money lenders and traders. Nor could they substantially increase their income without much joint action. Irrigation, or credit, or marketing and many other services could be properly secured only through mutual cooperation. But for viable cooperation group discipline and faithful leadership were crucial factors. The peasants had to acquire discipline the hard way by a routine of discussion and action. They had to create leaders from their own ranks. The self-serving gentry could provide neither true discipline nor loyal leadership. Our system of weekly village group meetings, selection of managers and model farmers, and their regular training at the Center was designed to create the necessary discipline and the new class of peasant leaders.

Our deviations could be summed up again as follows:

1. The orthodox extension methods conformed to a biased, *le haute en bas*, elitist view of the village. Unconsciously following the colonial tradition, they aimed at guiding (and controlling) the farmers through government agents. We opted, on the other hand, for decentralised, autonomous institutions, formation of groups and non-official cadres.

2. We redefined the role of departments and servicing agencies, emphasizing coordination with each other and with local institutions. Official experts were turned into teachers of group delegates, who became, in place of the government V.L.W.'s, the intermediate carriers of advice and supplies.

3. We accepted the bond of community for local government or welfare activities. But we promoted special-interest organizations among the deprived classes to prevent blatant economic exploitation. They could safeguard their interests and increase their output more effectively through class unions than through communal philanthropy.

4. We used the same decentralized, institutional, village cadre approach in programs of adult, health and family planning, and got the same encouraging results. (I refer again to the two papers mentioned in the previous footnote.)

Because of the recent recognition of the scale of rural poverty, there is at present a strong demand for better methods of educating and uplifting the backward majority. Although most extension programs still conform to the old pattern, in some cases new lines are being followed. I cannot say whether the principles we so laboriously discovered are now mere platitudes or still worth some consideration.

A Case Study of the ARSSI Rural Development Unit (ARDU)

by Betru Gebregziabher

The author placed participants in the ARDU project in the context of the global characteristics of the rural poor in terms of illiteracy, hunger and malnutrition, life expectancy and, what is further developed in the Ethiopian case, intolerable political and economic oppressions. The author then outlined several themes, which were developed in the paper. They are expressed in the following:

- Alleviating the problems requires among other things emancipation of the masses, as well as encouragement and assistance towards increased productivity. This task is certainly a very difficult and complicated one, defying the capacity of even the best-intentioned humans to design effective strategies. Yet without such strategies there is no real path to meaningful development. Rural development is one outcome of the search for such a strategy.
- Rural development is becoming, by necessity, the concern of more and more people—both academicians and practitioners—interested in "development" all over the world. Those of us who belong to the so-called "developing countries" have started to devote special attention and an overwhelming concern by realizing that it appears to be the best, if not the only, way out of our fate.
- By and large, the importance of rural development to the future of "developing countries" needs little underscoring. Being the home of the vast majority of their population, rural areas have great potentiality in terms of: generating employment opportunities, causing the broadest effect in income increase, promoting welfare, and increasing the demand for indigenous products and commodities to ameliorate prevailing trends toward growing unemployment, income disparity and unsupportable concentrations of population in urban areas.

- The key element in the rural development endeavor involves educating the broad masses to a point where they can run their own affairs and enabling them to become self-reliant by increasing productivity through their own dedication and hard work. Experience has clearly demonstrated that the introduction of technology from the so-called "developed" world cannot ameliorate the vast and chronic problems of the "rural poor" without the enthusiastic, conscious participation and dedicated action of the masses themselves.

The importance of non-formal education as the key means of informing and motivating the rural poor of the world to improve their standards of living is expressed by the author as follows: The whole enterprise of rural development is charcterized by non-formal education as an intentional and systematic strategy toward the emancipation of the rural masses from their bondage of oppression and absolute poverty. Insofar as rural development can be achieved through systematic educational efforts designed to be flexible and voluntary with provision for self-directed discovery, and inasmuch as the task involves a special endeavor tailored to the specific needs of a particular target, the name of the game is "the instrumentality of non-formal education."

ARDU Strategy

The ARDU strategy, based in part on the earlier demonstrated accomplishments of the Chilalo Agricultural Development Unit (CADU) project, emphasizes: (1) broad participation of the masses; (2) transformation of crucial components of the social system rather than introducing new ones, and (3) identifying the factors that matter–the potential sets of interrelated arrangements that compose 'systems approaches' to rural development. For ARDU the crucial components are: (1) agricultural production, (2) non-farm production, (3) supplies, (4) marketing, (5) infrastructure, (6) governance, (7) education (formal), (8) research, (9) health, and (10) welfare.

Historical Background

Ethiopia is a land of 470,000 square miles and an estimated population of about 27 million. It is the oldest independent state in the continent of Africa, but unhappily has one of the lowest gross national products per capita in the world. It is a country of great diversity in natural resources, physical environment, languages, and customs–over 60 languages and 200 dialects are spoken. Ethiopia is predominantly a rural, agrarian country. Approximately 90 percent of the population earns its livelihood from agriculture and related pursuits. The agricultural sector, composed primarily of subsistence peasants, generates about 65 percent of the GNP and about 95 percent of the country's foreign exports. Industry contributes less than 8 percent to the gross national product. Only about one-fifth of the potentially arable land is under cultivation. Until recently, members of the royal family, the aristocracy and higher officials of the church controlled a considerable portion of the fertile land—as absentee landlords. In February 1974, the oppressed masses and the armed forces collaborated in bringing an end to an era. One of the first and most historic steps taken shortly thereafter, on March 4, 1974, was the long-awaited nationalization of rural land, which was made the collective property of the Ethiopian people. No private ownership whatsoever was allowed.

More specifically, a provision was made allowing any person, without differentiation of the sexes, willing to personally cultivate, to have the use of rural land sufficient for a family. The size of land to be allotted to any farming family, however, shall not exceed 10 hectares. Further, the use of hired labor for cultivating one's holding is strictly forbidden.

Furthermore, the land reform proclamation (which sets the framework for the organization of non-formal educational activities described later) stipulated that farmers' associations be formed with a minimum area of 800 hectares. These associations are to serve as a foundation for cooperatives and collective farms as vehicles of rural development. Concurrently, the "Ethiopian National Democratic Revolution Programme" was created to foster the proper coordination of industrial and agricultural sectors of the economy in line with socialist philosophy and in accordance with the concept of a central planning system. The agricultural sector was recognized as the backbone of the national economy and was given priority over other sectors.

Review of the CADU Program

CADU was established in 1967 with the help of the Swedish International Development Authority (SIDA), as the beginning of Ethiopia's experimental and demonstration effort to promote agriculture and rural development through a comprehensive "package program." The package approach implied the coordinated application of essential elements of development in a defined geographic area with particular focus on improving the productivity of peasant agriculture. The project area was one of three provinces (awrajas) in the ARSSI region. CADU operated in an area of 10,000 square kilometers inhabited by about 350,000 people (70,000 families), of which over 95 percent are engaged in agriculture. Agricultural methods were very primitive and yields very low, with the result that per capita income was estimated to be less than $60 per annum. The major activities were conducted in two phases—1967-70 and 1970-75, which are telescoped in the summary of accomplishments which follow:

Agricultural Research and Experimentation

Important breakthroughs were made in the fields of crops, pasture, animal husbandry, agricultural implements and forestry. Wheat yields, for example, increased from 7-10 quintals (approximately 100 kgs.) per hectare to 18-25 quintals per hectare; barley from 12-18 quintals per hectare to 22-30; and maize from 30 quintals per hectare to 60. Exhaustive surveys were made of indigenous grasses and experimental breeding and management trials were carried on with dairy cattle, sheep and poultry. The work on agricultural implements emphasized tools and implements in the intermediate technology range which would help farmers in soil preparation, harvesting, threshing and transport.

Agricultural Extension

The work in agricultural extension was organized around a network of 30 extension offices which were responsible for disseminating the innovations originating in the Experimentation Department. The extension strategy relied mainly on the model farmer system, demonstration farms and various information campaigns. The adoption of innovations, although slow at the start, made dramatic developments as exemplified by the following abbreviated table of statistics.

Year	*Number of farmers participating in the credit program*	*Amount of fertilizer used in tons*	*Amount of improved seed used in tons*
1967-68	189	40	147
1973-74	25,201	6,960	240
1974-75	43,000	7,350	1,200
1975-76	55,000	8,500	1,900

Although the growth in the numbers of farmers participating in the credit program and in the use of modernizing ingredients of agriculture showed consistent growth from the beginning year, 1967-68, dramatic increases were experienced after the agrarian reform proclamation.

Provision of Input Supplies

The provision of input supplies involved the provision of cash, credit and a grain marketing service. The credit program (monitored by village credit organizations) experienced very high repayments of loans–96 percent, whereas the risky business of establishing a grain marketing system produced an increase of $2-3 per quintal of grain marketed under the system.

Promotion of Research Institutions

CADU emphasized the development of two types of peasant institutions--model farmers area committees (largely involved with the credit program) and cooperative societies. The farmers committees were designed, in part, to lay the groundwork for the establishment of the cooperative societies. The committees worked very well, but only 24 cooperative societies evolved. The projected peasant institutions were not only engaged in the provision of agricultural inputs and in the marketing of agricultural outputs, but also served as mediums for the organization and release of the untapped energy of the rural masses for sustained development effort. Furthermore, it was also hoped that these institutions would become the forum through which economic and social problems affecting the rural society would be aired and discussed and the appropriate solutions pursued.

Infrastructure

The building of 145 km. of all-weather feeder roads in Chilalo on a labor intensive basis was an important contribution to development by CADU. The roads were built at an average cost of approximately one quarter to one fifth of the cost charged by the Ethiopian Highways Authority. An intensive investigation of both surface and ground water resources and the sinking of over eighty wells and the construction of a number of ponds and dams also contributed to the partial solution of an age-old problem.

Production of Inputs

Two thousand tons of improved and certified seed, plus the distribution of 500 cross-bred heifers and the collection of semen were further achievements of the CADU era.

Industry Promotion

Although somewhat delayed in emphasis, the promotion of rural industries, based on earlier feasibility studies, began to take hold in 1973. The CADU Wood Industry, for example, produced 600 harrows, 800 carts, 200 beehives and some household furniture. The industry, directly and indirectly, supplied employment for more than ninety persons and made other contributions to the development of rural industry.

Reflections on the CADU Program

The solid achievements noted above can be summarized as follows: (1) the concept of a "package program" was demonstrated as being practical, (2) a large number of peasant farmers participated and managed to increase their crops and annual income by 50-100 percent, and (3) the development process and policies which were followed established the basis for a "continuous and sustained development through the creation of peasant institutions."

But the accomplishments achieved in the feudal framework, noted earlier, brought out problems which required different policies, procedures and organizational arrangements. For example, the demonstration that increased production and income was possible, with the use of improved methods, persuaded a number of heretofore absentee landlords to become directly involved in commercial agriculture, which caused the eviction of many tenant farmers. Furthermore, the then entrenched privileged class was neither willing nor able to solve the land tenure and associated rural structural problems. The new order promises the possibility of ensuring that the achievements of the peasantry will redound to their benefit.

The Future

Current operations and plans for the future are being developed which are largely based on avoiding the mistakes of the past and reinforcing and building on the positive aspects of the CADU era. Changes are being evolved in: (1) development philosophy, (2) strategy (methods and approaches), (3) organization of the work, and (4) the content of the program. The major changes under each of the above categories follow.

Development Philosophy

Omitting terminology of a political-economic character, the new philosophy which will guide ARDU's operations essentially boils down to a strategy which will be directed toward *social transformation*, instead of promoting the diffusion of technical innovations that predominantly characterized the preceding two phases of CADU.

Goals and Objectives

Consistent with this philosophy, the main goals and objectives of the ARDU program will continue to foster an integrated approach and a set of mutually supporting measures which were proven successful under CADU, but will give a much more pronounced focus on *social development*. Stated more specifically, greater attention will be given to: (1) involving all members of the peasant's household in development activities, (2) expanding employment opportunities in small and medium scale industry as well as agriculture, (3) the use of technology only if it serves to increase employment potential, (4) alleviation of the problems of the least privileged, and (5) the application elsewhere in Ethiopia of the experiences gained in ARDU.

Strategies for Goal Fulfillment

The new strategy for goal fulfillment, with special reference to the use of non-formal educational methods to attain the goals, is based on the need to correct the deficiencies of CADU's past extension strategy and methods. Briefly stated, these deficiencies were: (1) the emphasis given to the model farmer system, which tended to create a network of "local elites" in the project area, (2) the narrow specialization of field personnel in agricultural extension, livestock, implements, etc., which proved to be a source of confusion to the farmers seeking their services, as well as entailing duplication of resource allocations and, (3) confusion and inefficiency arising from the transmission of instructions to field agents through a group of specialized superiors. The new operational strategy, which has significant implications for the use of non-formal educational methods in changing attitudes and methods of work of government employees and peasant cultivators as well, will: (1) give greater emphasis to creating a conscious and self-reliant cooperative community rather than merely increasing individual economic productivity. (The author indicates that this new emphasis should not be construed to mean merely "consciousness raising" in general, but the building of a particular kind of consciousness in response to a particular set of historical and material conditions); (2) have rural development teams serve peasant associations as collective units based on a detailed production plan and work program developed by each collective enterprise, and (3) stress close working relationships between the rural development teams and the newly established local institutions such as revolutionary administration and development committees and cooperatives.

More specifically, under the heading "Training Non-Formal Educators," the author describes the new emphases in the following:

- Besides the mass-oriented educational endeavors each rural development team undertakes, a special effort will be directed toward developing cadres of change from within the peasantry.
- The main education center at the regional level will launch specialized educational programs to prepare rural development agents, local cooperative managers and selected peasant representatives (leaders of PAs, women and youth groups, coops, etc.) for the duty of stimulating and facilitating change in their respective localities in a planned and systematic manner, as well as assisting in the successful implementation of local development plans. This regional education center will also serve as the main source for the supply of educational materials for the whole non-formal educational venture in the Project Area. Thus a team of specialists (including media and subject matter) will be entrusted with the task of continuously supplying District Development Offices and Rural Development Centres with selected educational materials. Furthermore, a mobile educational unit with a team of specialists and audio-visual aides will render a well-programmed service at regular intervals in the field to supplement and complement the educational efforts of the rural development teams.
- The District Development Office, on the other hand, will organize local non-formal education ventures where short educational programs (seminars, symposiums, special training programs, etc.) are conducted to reach a broader target than would be managed by the regional education center. The mobile unit will be used to reinforce the educational effort at this level too.

– All participants in the Educational programs indicated are expected, in turn, to play a key role in mass education by sharing what they acquire with their fellow peasants.

Content of the ARDU Comprehensive Package Program

The content of the ARDU comprehensive pacakge program, in very abbreviated form, will: (1) give more attention to social research on the "social fabric of rural communities"; (2) stress the development of strong peasant organizations, with greater emphasis given to the goal of "self-reliance, self-governance, popular participation, equality and, in the final analysis, sustained development; primary service cooperatives are to be established which will serve 3,000-3,500 members belonging to 14-17 peasant associations"; (3) stress the political, family and basic education of the masses, and (4) encourage more self-help activities focused on the construction of health, education, marketing centers and other public facilities as determined by the communities and the agencies concerned.

Economic components of the ARDU program will: (1) continue to emphasize increased agricultural production, (2) emphasize diversification of agriculture, (3) promote industrial crafts, (4) give attention to local specialization and regional diversification, (4) emphasize afforestation, reforestation and other conservation measures, (5) extend veterinary services, (6) institute resettlement schemes, (7) revamp credit and marketing services, (8) recast some aspects of the production of agricultural inputs (seeds, agricultural implements, etc.), and (9) extend the building of rural roads, water supply, irrigation, stores, low-cost housing and other facilities.

Benefits and Costs

The costs of the CADU experimental demonstration program are indicated as totalling approximately 44 million Ethiopian dollars for the period of 1967-75. Projected costs for ARDU for the 1975-80 period are estimated at 31.1 million Ethiopian dollars. Increased production on presently cultivated and new areas is expected to increase cash income of the average participant, reduce the necessity for grain imports and provide a basis for the development of a more effective tax collection system. These and other measures will, when combined, provide the necessary resources to finance the ARDU project.

Résumé of No. 6

Plan Puebla: Ten Years of Experience in Promoting Agricultural Development Among Subsistence Farmers of Mexico

by Heliodoro Diaz-Cisneros

Characteristics of the Region and Participants in the Program

The clientele of Plan Puebla consists of approximately 275,000 persons (47,000 heads of families) living in 168 communities. Most of the people are direct descendants of the Indian population found in the region at the time of the Spanish conquest. These families preserve a mixture of the cultural values of both the Spaniards and the Indians. The average land holding per farm operator at the start of the project in 1967 was 2.7 hectares, which was planted to corn. A base line study in 1967 revealed the following basic facts about a sample of 251 campesinos who were interviewed:

1. Average head of family was 46 years of age;
2. Average family size was 5.5 members;
3. About 77 percent of the heads of families indicated that they could read and write, but the interviewer also indicated that they read and wrote "with considerable difficulty";
4. Those who indicated ability to read and write had 2.4 years of formal education;
5. Almost half of the people reported that they rarely left the village;
6. About 63 percent had electricity, gas or fuel oil in their homes; only 13 percent had water; 6 percent drainage; 8 percent had a television set, and 1.6 percent had a refrigerator;
7. The average total family income equalled U.S. $666.80–about 40 percent of which came from off-farm income and 30.4 percent from farm operations;
8. Most of the food was home produced, principally corn with some wheat bread, eggs, meat and milk, but the

poorest families ate practically nothing but corn and beans;

9. 44 percent of the families indicated that their homes had only one room besides the kitchen.

The level of technology used by the farm operators was low—only 65 percent had used chemical fertilizers; the use of hybrid seed was almost nonexistent and the yields were low. The above facts provided the technical personnel of the program with the challenge to devise a program to substantially increase the yields of corn with appropriate agronomic and other technology. As in many other parts of the world the differential between the best producers (among the best in the world with an average of 4.5 percent increase per annum) and the subsistence farmers was dramatically wide. Those who were classified in 1960 as below-subsistence farmers comprised 50.4 percent of the total farmer population but contributed only 4 percent of the gross agricultural product. On a Mexican-wide basis, 84 percent of the farmers were classified as subsistence farmers who, if they were to remain "neglected . . . would continue living and producing at minimal levels, with little hope for themselves and their families." Thus, they would constitute the main burden in the process of development in Mexico. Furthermore, the project planners concluded that there was no modern agricultural technology to offer that fitted their needs.

These considerations form the essential background information for the pilot project called "Plan Puebla."

Philosophy and Organization of the Action Programs

Conceptual Framework

In meeting the needs outlined, the conceptual framework of Plan Puebla was derived from several interrelated agricultural and social science disciplines, as well as from the working knowledge and field experience of those who integrated the first team. The strategy was conceived as an integrated plan of attack on the many problems limiting farmer use of adequate technology. It was assumed that the following factors of change should be available in the project area: (1) information on efficient production practices, (2) effective communication of agronomic information of farmers and agricultural leaders, (3) adequate supplies of agronomic inputs at easily accessible points when they are needed, (4) crop insurance, (5) favorable relationship between input costs and crop values, (6) adequate production credit at reasonable rate of interest, and (7) accessible markets with stable price for maize.

The broader Project operational elements were: (1) the *agronomic research program*, designed to generate suitable technology for rainfed areas; (2) the *communications program* (or technical assistance program), was designed to deliver the technology generated by the agronomic research program; (3) the *evaluation program*, to measure the effectiveness of the action programs; (4) the *coordination program*, designed to administer the resources assigned, to coordinate with the public and private agencies, and to provide service to the subsistence farmers of the region.

To generate more suitable technology for the campesinos in the project area, the agronomic research spanned the entire region. Experiments were established at representative sites, on parcels belonging to campesinos. The agronomic research findings were delivered by the researchers in the form of "packages" of new practices and were recommended to the campesinos by technical assistance agents who promoted use of the package at the community level.

The objectives of Plan Puebla agreed closely with state and national objectives of the agricultural sector.

Participants in the Action Programs

The farm operators (campesinos) and their leaders were considered the most important components of the action program. *Formal* leaders were the elected municipal and ejidal authorities, and the *informal* leaders, who were considered of central importance, held no public positions within the community. At the time of the benchmark study investigators found extreme distrust displayed toward outsiders. Historically, the Spaniards had gradually instilled a feeling of racial inferiority among the inhabitants of the area.

From the outset, Plan Puebla gave high priority to the quality of technical personnel associated with the project. They were essentially responsible for the dual role of encouraging the service agency managers (principally agricultural and credit) to make changes in the formal rules that regulated the process of providing the services and for stimulating changes in the attitudes of the campesinos toward the agencies. In the selection of technical personnel associated with the project equal weight was given to the academic backgrounds of the candidates and to the personal characteristics of the individuals, their vision and their initiative which would allow them to work well in a group effort; plus good basic training in the discipline for which they would have primary responsibility.

Financial and Other Support

Financial support for Plan Puebla for the first seven years (1967-73) of experimental work came largely from a grant made by the Rockefeller Foundation, which was administered by the International Maize and Wheat Improvement Center (CIMMYT). This organization and the Graduate College of Agriculture at Chapingo provided technical advice for the field personnel. Since 1973, Plan Puebla has not received financial support from any external agency, foreign or national, and has depended wholly upon the federal budget.

The Ministry of Agriculture at the national level and the Agency of Agriculture at the state level strongly backed the action program during the first seven years and took over the administration of the program through the Graduate College of Chapingo in 1974.

Puebla's state government provided political support for the program and backed all the actions taken among the institutions to stimulate participation. They also viewed the strategy of Plan Puebla as an effective means for beginning an economic and social transformation of the area. Credit and fertilizer services were provided by both private and governmental agencies. The public marketing agency also provided important price supports for the campesinos.

The agronomic research for Plan Puebla has required provision for timely availability of chemical and organic fertilizers, seeds, insecticides and all the necessary equipment to conduct the experiments. Technical assistance agents helped the campesinos to obtain necessary credit on time. The recommended materials were not, however, provided—only information and technical assistance were provided on how to obtain and use the materials which could be obtained from private and public agencies. The number of campesinos who volunteered for participation in the program grew from 103 in 1968 to 8,229 in 1976.

In agronomic research the advisers developed a field manual with step-by-step procedures for site selection and operation of field experiments which has been modified through experience, permitting important methodological modifications to the experimental design techniques conventionally used in experiment stations.

Other Aspects of the Administration of Plan Puebla

Staffing and Training of Employees

The staff responsible for operating Plan Puebla—all non-formal educators—is made up of technical personnel (agronomists and others, mostly with B.S. degrees), and teams of four or five field aides, campesinos of the region who are elementary school graduates. The teams that now function in Puebla participated in a five-month training course prior to taking over the specific program. In addition, local leaders have played a key role at the community level in organizing the groups and in the demonstrations. In time these local leaders were the formally elected leaders in each community. But after the first contacts were made with the local community, informal leaders emerged and played the key role in the process of getting the group organized and in representing group interests. In some cases the formal leaders did not have prestige at the community level or did not have time to get involved in Plan Puebla activities, thus could not represent the interests of campesinos later on.

Technical personnel who performed satisfactorily for two to three years in the field were given the opportunity to continue graduate studies in Chapingo on fellowships for work on a master's degree. Short courses for field aides in specialized subject matters were provided. They were also given salary increases for satisfactory performance and some were promoted to better jobs.

Technical and advisory assistance was provided by Mexican personnel and by foreign personnel furnished by the Rockefeller Foundation (through CIMMYT) for the first seven years.

Annual Reports

At the end of each agricultural cycle, annual reports are prepared by the Director for the Governor of the State, the Ministry of Agriculture, the managers of private agencies and the campesino sector and their leaders, of the most important findings to be taken into account for the next agricultural cycle, including services required by the campesinos. The technical assistance agents report on their activities with the campesinos at the community level and the technical and non-formal education methods used. *However, the most relevant part is the participation of the campesino leaders who speak about the results obtained and the improvement of the family well-being as a direct result of the use of the technical recommendations.*

The presentations of the annual reports are put together in an informal publication which is distributed among the campesino leaders and managers of service agencies. In addition, the supporting external agency—CIMMYT—produced three publications during the seven-year period which were distributed within and outside of Mexico.

Evaluation Studies and Results Achieved

After much discussion of the pros and cons of external versus internal evaluations, the decision was made to include evaluation as an integral part of the project to obtain before and after measures, plus a continuous feedback to those in charge of the program. The director was interested in rapid and easy evaluation of different problems of key limiting factors and of potential solutions which would serve as a continual assessment and redefinition of the strategy. These evaluations included estimates of yields and operations of private and public service agencies. A mid-term research survey compared results achieved by campesinos formally participating in the credit program and a general sample of campesinos in the region.

Direct and Indirect Consequences of Plan Puebla

Creation of Employment

The results of emphasizing labor intensive technology in the project indicated that campesinos who followed recommended practices used 30 percent more man days per hectare of work than those who employed conventional technology.

Family Income

The average family income in 1967 equalled $666.80 which rose to $825 (adjusted to 1967 prices) in 1970 or an increase of 23.8 percent. In terms of distribution of income, the proportion of families in the lowest category (less than $400) decreased from 55.8% in 1967 to 43.5% in 1970.

Improvement of Family Diet

The campesinos involved in the program applied a larger proportion of their rising incomes to improved diet by 1970. For example, the proportion of families who ate fish every four to seven days (once or sometimes twice a week) tripled, from 3.2 to 11.3 percent between 1967 and 1970; the proportion who said they ate fish at least once a month, doubled. Cheese, chickens, eggs, fruit–even beef and pork to a lesser extent–all showed up more frequently in 1970 campesinos diets than they had in 1967.

Impact of Plan Puebla Strategy on Mexican Institutions

Over the ten-year period of the operation of Plan Puebla, important contributions have been made in several areas, such as: (1) methodological contributions to related disciplines–to scientists now working at the National Institute of Agronomic Research; (2) to training programs for work in this field and for the establishment of a Training Center for this purpose, and (3) to an expansion to eight other regional programs in different sections of the country. The project has, however, had less influence on the extension service agency than on the research agency.

Non-Formal Educational Methods Used

Educational and Promotional Films

After the first two years, when experimental results were established, a series of three films was produced by the communications section to accelerate the extension of the practices found useful by the campesinos. The titles of the films, roughly translated, were: "Do You Want to Increase your Corn Crop?", "Agricultural Credit" and "The Savings Account." The *actors in all films were the participating campesinos* who explained in their own words the advantages which they experienced from their participation. The messages from the campesino actors who were living under the same or similar conditions were considered to be very effective. Audio-visual aids were also produced to complement lectures on how to use correctly the technical recommendations. Interested campesinos who viewed these films and other visual aids were provided additional opportunities to discuss the messages and to join as participants in the program.

Demonstration of Methods and Results

After the members of the credit groups in each community had obtained the required fertilizer materials, the technical assistance agents (in collaboration with the representatives of the groups) set up objective demonstrations of methods to properly mix and apply the fertilizers at recommended rates. Usually the demonstrations of methods were held on the land of a campesino who intended to sow his crop on that specific day. Invitations were extended to all the people of the community. Technical assistance agents, field aides and volunteer farmers were involved in the demonstrations. After the initial demonstration, all campesinos were invited to participate in the measures demonstrated so that they could learn by doing. Similar procedures were used to demonstrate the use of insecticides, herbicides and the results obtained by those who followed technical recommendations. *Campesinos who had adopted the newer practices were in all instances the central actors in the demonstrations.* The fact that the campesinos addressed the observers in their own words made it easier for other farmers to understand the message about the advantages of the new recommendations. Their positive reaction was reflected immediately in the rapport which was established, which in turn accelerated the interchange of ideas about specific aspects of the recommendations.

Regional demonstrations were also held which were promoted by personal letters to campesinos and local promotion by each community through hand bills, posters and announcement by sound trucks.

Group Actions in Non-Formal Education

Community group leaders (para-extension agents) who used non-formal educational methods were actively involved in promoting lectures and demonstrations; administering the credit program, which involved group sanctions to irresponsible members, or assistance to members who experienced difficulties in repaying loans for reasons other than irresponsibility; arranging for visits between groups and to the experimentation station at Chapingo, some 80 miles from the center of their region. In the process of these visitations and the interchange of experiences in the management of credit programs, use of fertilizers, improved seeds, control of insects, plant diseases, weeds and other key subjects, other "unprogrammed" subjects were discussed and spontaneous demonstrations were made by campesinos who knew how to castrate pigs, prune and graft trees and other useful skills. Some of these activities were thought to be among the most important in the process of non-formal education.

Actions of Credit Groups

As a spin-off of the efforts of the credit groups to secure enough credit to obtain the fertilizers to increase the yields of corn recommended by the technical experts and demonstrated to the satisfaction of the campesinos, additional discussions were had with the government officials to obtain mid-term and long-term credit for the purchase of work animals, tractors, milk cows, tube wells and farm buildings—the latter to be operated and administered by the credit group or society. *These activities would not have been possible if the basic problems of producing enough corn to satisfy consumption needs of the family had not been solved.* But having solved the basic problem of meeting minimal needs, the work of the several credit groups to obtain mid-term and long-term loans made an even more important contribution to the family's well-being than did the increased yields of corn. The developments indicated above illustrate the *evolutionary character* of rural development, aided and abetted by non-formal educational discussions and demonstrations, once basic needs have been met.

Campesino Theatre

After eight years of developments under Plan Puebla, a campesino theatre group from the neighboring state of Morelos presented a play which dramatized the problem of the need to eliminate the middlemen who are the main beneficiaries of the work of the campesinos. The actors in the play represented characters well known to the campesinos in their own communities. Of course, the central role was that of the middle man with his fat belly. There also was the slender campesino actor, who works as peon when he does not find someone from whom to rent land or to work it on a share basis. A second campesino actor has his own parcel and his work animals but does not have enough money of his own nor does he have access to credit for modern inputs. The third actor is a campesino who has enough land and work animals, but wants more land—to purchase or to rent from someone else—and wants to obtain a tractor to be more efficient, but he does not have enough money to purchase modern inputs to improve his production methods. The situation faced by the three actors forces them to depend on the middle man to obtain a loan to purchase fertilizers and to hire hand labor every year. At harvest time the three of them are in trouble with the middle man. In the end, they are in debt to him, after he has taken all the products they have harvested. As the play draws to a close, they meet on the stage and talk about their misfortune and problems posed by the middle man. Then suddenly one of the actors suggests that the reason the middle man exists and is taking advantage of all the campesinos in the community is because they are not organized. They decide to join their forces to eliminate the middle man, to have access to credit service, and to sell their products directly to the markets. The play ends with a song which is sung by the actors and the audience. The title of the song is Levantate Campesino! (Wake up Campesino), which everybody sings with great enthusiasm.

The impact of the play has not been evaluated yet; however, judging from the reactions of the audience, this sort of campesino theatre should be one of the most important non-formal education methods in the future.

Chapter 5

Non-Formal Education in Nutrition, Health Delivery, and Family Planning

Editor's Note

The three case studies which follow are focused on the development areas of health delivery, nutrition and family planning. The Candelaria Project in Colombia (health delivery and nutrition) and the Poshak Project in India (nutrition) are both carefully designed and well researched experimental projects addressed to fundamental problems in the health field. Both projects were supported by their governments and by outside organizations. Both used medical and paramedical personnel with extensive and recurrent training programs, and both influenced government policy for expansion of the programs beyond the initial operational areas. Extensive use was made of nonformal educational devices and procedures in both projects.

The use of an indigenous social organization of women in Korea—the "Mothers Clubs"—for education about and promotion of family planning practices is an excellent example of fitting a development program to the customs and social organization of a society. Other principles of successful development programs, using nonformal educational methods, demonstrated in the project include: (a) the use of paraprofessionals, and (b) the expansion of the initially designed program to other program areas of interest and concern to participants.

The three studies in nutrition, health delivery and family planning have one other factor in common, namely, the *personal* nature of the changes in the behavior of participants which were advocated by development agents. These changes are contrasted in some degree to changes in agricultural methods or the operations of local government which are somewhat less personal in their effects on the life styles of participants. Sensitivity to local customs and mores was, however, essential in all three cases.

Résumé of No. 7

The Poshak Nutrition Project in India

by Margot Higgins

Nature of the Project

The Project Poshak was an integrated program (conducted from 1971-74) designed to improve the nutritional status of preschool children and pregnant and lactating mothers in selected rural areas of Madhya Pradesh, India. It was designed and administered by CARE/India with the support, financial and other, of AID/India, UNICEF, the Central Government of India, and the State Government of Madhya Pradesh. An integrated approach, involving the three inputs of nutrition (food) supplementation, childcare education and augmented health/medical services, was adopted in order to achieve a synergistic effect and to ensure a stronger impact for the basic concept, which was that of a take-home dry ration food distribution to enrolled beneficiaries, using an existing infrastructure, the Primary Health Centers and their satellite subcenters as distribution points.

Madhya Pradesh was chosen for the project for a variety of reasons, such as having a sparse and scattered population, large areas of unproductive land, one of India's lowest per capita income levels, including a large tribal population. The State did, however, have an existing infrastructure (without which many programs have failed in other countries) of 450 primary health centers (PHC's) and satellite subcenters which were staffed with doctors, health workers, auxiliary nurse midwives and other workers. The staffing of most PHC's fell far short of the recommended level, but they were operational and did serve as distribution points for food and services. The addition of the nutrition component to the normal services of the centers promised to yield benefits to the State health program beyond those inherent in the project design. PHC's were in many cases underutilized by the communities they were intended to serve, by reason of difficulty of access, suspicion of modern western-style medicine, antagonism to the heavy emphasis on family planning and the lack of interest or involvement in the local community evinced by many of the medical officers. It was thought that the incentive of a food distribution program might lead to better rapport and increased attendance at the PHC's, both of which benefits did in fact result from the program. Even some of the antagonism to family planning was mitigated and an increased number of family planning accepters was noted at participating PHC's.

Illiteracy was in the range of 50 to 75 percent respectively, for non-tribal and tribal males and 90 to 96 percent for non-tribal and tribal women.

Parents of *all* children 6 to 36 months were invited to enroll in the program—75 percent of whom were moderately to severely malnourished. Approximately 55 to 60 percent of the eligible were enrolled. In addition pregnant and lactating women were invited but the pregnant women were difficult to enroll, principally because (1) they were reluctant to admit pregnancy for fear of the evil eye; (2) they did not wish to be examined by male doctors (no women were assigned to the project) and (3) they had no conception of increased or changed nutritional needs during pregnancy. Lactating mothers were, however, very responsive.

More specifically, the project involved a planning stage which involved recruitment and training of professional personnel (pediatricians, medical officers, lay health visitors and auxiliary nurse midwives), mobilization of resources and allocation of responsibilities and conduct of base-line surveys. Implementation of the program was designed in three phases called respectively, the Exploratory, the Extension and the Intensive phases. As a whole the project was intended to serve as a feasibility study for a large scale replication under a variety of conditions, with different levels of input to determine the relative cost effectiveness and efficacy of the program. The exploratory stage was designed to test the overall program concept with particular reference to logistics, delivery systems, availability of equipment and materials and related components. In the extension phase, the designated villages were in the most remote and inaccessible districts of the state, furthest away from communication and transportation centers and beset by every kind of topographic and climatic difficulty, such as monsoon rains, washed-out roads and bridges, etc. Population was sparce and scattered and the Health Centers were for the most part greatly understaffed.

In the intensive phase, a smaller and more concentrated area of the state was designated, in order to allow for a much greater participation by the Delhi-based staff, who joined forces with local staff in carrying out a number of sub-studies on specific facets of the program, particularly on the potential advantages of modifications in the basic plan such as changing the food component to a locally made multimix, changing the distribution point to the local school instead of the Health Center, and making a nominal charge for the program.

Need for the Inclusion of a Nutrition/Child Care and Education Component

The program was based on the fundamental principles that:

1. Nutrition intervention in the form of straight feeding programs (such as the school lunch or nutritional rehabilitation in hospitals or clinics) has little impact on behavioral patterns unless it is linked with, and reinforced by, concurrent programs of nutrition education;

2. The young child's nutritional needs are crucial but the *quantity* of food needed to fill them is not prohibitively large, and the food will not be given to the child unless the parents are convinced of the wisdom and desirability of such a course;

3. Major differences exist between the benefits of food supplementation in an *institutional* setting than in a *home* situation, because private behavior is different from monitored behavior. The principal virtue of the home situation is the direct involvement of the mother and family in the process.

Elements of the Child Care Education Component

The most effective way to educate a poor and largely illiterate community in health, nutrition and childcare is generally accepted to be a multi-faceted approach, using person-to-person communication and counseling, available mass media such as films and slide shows, group participation events such as food demonstration and sampling, role playing, etc. All these approaches should be reinforced by visual material conveying easily understood messages which must be appropriate to the ecology and to the sociocultural concepts and traditions of the audience. All of these elements were included in the design of Project Poshak.

To give effect to the project, two important measures were taken: (1) the training of the staff, and (2) the development of educational materials. Some of the more salient aspects of these activities are outlined below:

Training of the Staff

1. Four one-week training sessions were held, the first for pediatricians and medical officers deputed to the program and the following three for paramedicals, women health visitors and auxiliary nurse midwives.

2. The courses provided maximum opportunity for discussion, participation, feedback and involvement in the practical aspects of running a community health program. The skills and techniques necessary for the conduct of community nutrition programs were almost wholly neglected in medical schools and the training of paramedics had concentrated almost exclusively on obstetrics, with little or no instruction about nutrition and its relation to health.

3. The three key components of the program were covered in depth, including the composition, preparation and utilization of the *food* to be distributed, the use of *educational media* such as growth charts and flip charts, the latter being used as the equivalent of lesson plans, and on the equipment and drugs supplied to improve the *medical services* offered at the centers.

4. In-service training was provided on an almost continuous basis by the central project team, the members of which spent considerable time in the field.

Development of Educational Materials

The development and design of appropriate visual material to guide and reinforce nutrition education in an extremely poor and backward community for a largely illiterate audience demands a high degree of sensitivity. One must talk *with* people, not *at* them or *down* to them. Apropos of the above point, the author reported parenthetically that she finds much of the nutrition education material designed by the advertising profession is either condescending or pretentiously sophisticated. Pictures of a white-coated doctor pointing an accusing finger at the village mother and telling her that what she is doing for her child is all wrong were cited as examples of how not to do it. The mother may be illiterate, but she is not necessarily stupid, and she probably finds such an image very threatening.

On the other hand, producing a poster which contains nothing but a string of long words: Proteins, vitamins, minerals in your diet, and not even a picture, seems absurd. There are plenty of posters like that, and a lot of good they do.

In the same vein, the author indicated that one of the problems with training community nutrition workers, and in providing them with back-up material, is to avoid getting them hung up about *technicalities* of nutrition. An example was cited of a training course for community nutrition workers in Liberia, where four tongue-tied young ladies were being reprimanded because they couldn't remember the difference between saturated and poly-unsaturated fats, as defined in the textbook they had been struggling through. What possible relevance could this have to working in a tribal village in West Africa, which was where they were needed? Changes in dietary behavior are seen by most of the rural poor as at best a risky speculation, comparable to jumping into a river whose depth is unknown. No mothers would take such a risk because someone shouted long words at them; but if stepping stones are positioned and help provided to get across a foot at a time, they may be willing to give it a try.

All the visual material used in the program was especially designed to fill the needs of the program and was simple, specific and used one at a time. Illustrations, for example, were not glamorized; the domestic background did not show electric lights; milk was represented by a cow and a bucket instead of a sealed milk bottle. Pre-testing of the material required changes which were more culturally acceptable and more informative for illiterates or semi-illiterates. In addition, however, a short well-illustrated pamphlet was designed for village intellectuals and teen-age school children to ensure their understanding and support of the program and to enlist their help in disseminating the information to those who could not read.

Record keeping and other forms which were necessary to measure results were made available to the doctors and para-medical personnel at the Centers. The maintenance of these records, crucial to the purposes of the project, was not easily achieved and required additional in-service training to accomplish a satisfactory level.

Slide shows which could be shown by means of a battery-operated projector on the walls of a hut or any convenient flat surface were well received. The logistics of showing motion picture films (no audio visual van, generator or drier, etc.) made this medium almost unusable.

The Nutrition Education Program in the Field

Preparatory Stage

The preliminary or preparatory stage (which preceded actual food distribution or provision of medical services) entailed a census survey of all project villages, experimental and control, and the enrollment of all eligible children, pregnant and lactating mothers. No effort was made to screen out those who were less malnourished, nor was education in childcare or nutrition perceived as a need. The attraction of the program centered on the promise of additional food and later on the possibility of free medication. Even these two attractions, however, did not completely eliminate the suspicion that participants would be pressured into accepting an irreversible method of contraception. The pamphlets, previously referred to, helped dispel doubts and maintain interest, but an unforseen problem related to the deteriorating quality of the initial food supply caused a serious problem. Cooking and sampling demonstration of a new food commodity which was airlifted to the Centers partially offset the initial difficulties. The demonstrations, using familiar ingredients, cooked on a primus stove, restored confidence.

During this period, attitude studies regarding widely held concepts of acceptable food were also carried out. Hardly any mothers were prepared to abandon or even lessen their adherence to their traditional beliefs, but there were some indications that pragmatic modifications of orthodox beliefs were possible.

In addition to attitude surveys, a series of trials involving flavoring and sweetening were made which resulted in sweetening the food commodity selected for the program at a level which pleased the mothers and thus encouraged them to offer it to their children and to teach them to eat and enjoy it.

Operational Stage

The paramedicals carried the chief responsibility for providing nutrition education, for the weekly distribution of food at the centers, for counseling, and for making referrals to doctors when necessary. Classes, however, were not held at the centers because of the difficulties of holding classes for women whose time was consumed with their incessant chores—including field work. The more readily available indigenous medical man was another of the handicaps. The alternative adopted was fortnightly visits to each participating family by the paramedics which was found to be the most effective part of the childcare/nutrition program.

Village clinics, which brought doctors and paramedics right into the village, were very effective. The once-a-month on-site medical service to the villages was a precedent-setting luxury.

Results of the Program

The primary objective of Project Poshak was to demonstrate the *feasibility* of an integrated program of food supplementation, childcare education and other health services, based on a dry take-home ration, which was distributed via an existing infrastructure, that of the state network of health centers. This objective was achieved. In spite of innumerable difficulties, some failures to comply with schedules and meet targets, the program did not fizzle out or become unmanageable. Logistical and administrative problems proved to be soluble. The centers which failed to get the program off the ground failed because of a lack of interest or comprehension, or because of sheer non-availability of staff, or they failed because of apathy or non-accessibility at the village level, but not because food, supplies and teaching materials did not arrive on time. Some of these problems (though not all) might be eliminated by improvements in the professional education and training of doctors and paramedicals, others by a greater emphasis on sensitizing the target community before initiating the program. Some problems, such as unfavorable geographic and climatic conditions, may be so intractable that this sort of program is inappropriate.

The primary objective of the study was to demonstrate feasibility; the secondary objective was to measure *cost-effectiveness*, under different conditions and with different levels of input and supervision. Impact upon individual mothers and children is what most audiences and readers look for first when the project under consideration is concerned with nutrition and nutrition education. How much weight did the babies gain, how much knowledge did the mothers acquire, and use? And therefore, by implication, why am I putting the cart before the horse?

The answer to this hypothetical question, I think, is that the Poshak Project was an examination of the possible.

Résumé of No. 8

The Candeleria Project

by Alberto Pradilla

Director of the Project

Nature of the Project

The Candeleria Project was a pilot or laboratory project in comprehensive health delivery—with special emphasis on nutrition—which operated from 1968 to 1973 in an area near Cali, Colombia equivalent to a United States county. It is an integral part of the existing governmental health service and was approved as a pilot project by the Ministry of Health. The University of Valle, a public institution of higher education financed jointly by the national and state governments, is affiliated with the project and used the laboratory for research and for training of its medical students. The University of Valle program in medical education emphasizes "social medicine" and the Ministry of Health requires medical graduates to serve in a rural area for one year after graduation. A study of the frustrations and unproductive experiences of graduates of older medical schools who worked in rural areas to fulfill the requirement indicated was a major factor in the university's decision to design a program to provide exposure of staff and students to the realities of rural communities in which their students would be involved. This decision formed the basis for the Candeleria Project.

A concurrent factor which was taken into account in the design of the pilot-experimental program was the potential availability of 18- to 20-year-old women who were obliged to render one year of compulsory social service under a law which was then under review. The law was never passed in the Congress but the idea remained, and the women became involved in the project as health promoters.

The project was supported by the Rockefeller Foundation.

Background Studies for the Project

Several studies and interventions were conducted during 1960-68 on various medical conditions such as morbidity, fertility, mortality, nutrition and related conditions of the population and on socio-economic factors such as land tenure, employment, income levels and related subjects which served as background for the evaluations. Some of the major findings which were taken into account in the design of the pilot project were:

1. The principal causes of illness and death, especially among children, were related to gastro-intestinal and other diseases which are preventable;

2. Almost half of the pre-school children suffered some degree of malnutrition;

3. Diarrhea and upper respiratory diseases were very prevalent, as was goiter;

4. Many of the above conditions were related to poor socio-economic conditions, such as: (1) only 14 percent of the houses were considered fit for human habitation, (2) 60 percent of the water used was untreated, (3) 84 percent of the homes had no sewage connection, and (4) only 35 percent of the rural homes had latrines;

5. Income levels were very low: $20 to $30 average per family per month for 40 percent of the families and $20 average per family per month for 30 percent of the families;

6. Most farms were very small. Eighty-three percent were 5 hectares or less occupying 6 percent of the area, whereas 4.6 percent of the farms were 100 hectares or more and occupied 76 percent of the area;

7. The population of the county seat was 7,000 to 7,500 persons and 25,000 for the whole county.

Programs Developed

The following two major determinations were made, based on diagnostic and other studies, to guide the medical/nutritional aspects of the program: (1) to focus on problems of malnutrition (recuperation and food distribution) which were determined to be the most important indications of other health-related variables and which interact with other factors, social and demographic, in a "complex web of causation" and (2) to design medical service programs on the basis that very few medical problems need the extensive knowledge and sophisticated skills of well-trained physicians to solve.

Other factors which were taken into consideration in the design of the experimental program included: (1) the scarce health resources, especially in rural areas; (2) the high costs of medical service, which had the result of excluding low income groups in the use of the services; (3) lack of health education programs; (4) excessive time involved in curative measures which limited the time available for preventive work; (5) lack of methodology for informing and motivating mothers to participate in nutrition and other programs, and (6) coordination of the services of all members of the health team.

Other programs were developed in the project in sanitary engineering, family planning, community development, dentistry, home improvement and other fields which were not a part of this presentation.

Organization of Medical Services

The basic medical delivery unit for the Candeleria Project, which was an integral part of the governmental health delivery system, was the *Health Center*. The experimental program added three units to the regular government program: (1) the Basic Unit, (2) the Service Unit, (3) the Program Planning and Supervision Unit.

Basic Unit

The key unit in the expanded program of medical service, which gave a heavy emphasis to nutrition, was the Basic Unit. The Unit served approximately 7,000 persons (in 1,300 families) and was staffed by thirteen promoters. The promoters, paramedical non-formal educators, were women 18 years or older with at least five years of primary school education. They were recruited from the communities which they served. They served as volunteers. Their non-monetary compensations were certificates, presents at Christmas time and eligibility to secure further training as nurses' aids. Their work was focused on visits to all families in their communities once every two months, during which: (1) they looked for early evidence of malnutrition and other high risk health conditions in children and adults, (2) secured information for questionnaires on disease episodes, growth, weaning, and other data about children, (3) provided information on health and nutrition subjects, and (4) referred problems to the Service Unit. The principal non-formal educational materials which they used were a Health Card and a

Mother's Almanac. The Health Card was kept by mothers for all children under five years of age on which immunization records, weight and other health information was kept. The Almanac is a wall calendar which has visual messages, changed every month, on family planning, infant feeding, hygiene, sanitary measures, pre- and post-natal care, and other subjects. The promoters were trained for six weeks in the techniques of home visitations, simple medical treatment, educational techniques for effective use of the health cards and almanacs on referrals. Continuous in-service training was provided on problems encountered in the performance of these tasks and on other subjects related to improved performance in the tasks.

Service Unit

The Service Unit was staffed by four auxiliary nurses and four public health nurses' aides. These persons were primarily responsible for the continuous training and motivation of promoters; for analysis of questionnaires and other materials brought in by the promoters; for provision of family planning and other health information, and for provision of some medical services to medium risk cases. Midwives' services were also provided under this unit.

Programming, Planning and Supervision Unit

This unit was staffed by one medical student and one registered public nurse. It was wholly responsible for the functions performed by the system and for treatment of curative referral cases.

Results Achieved

Quantitative achievements were recorded in the following key areas of health: (1) complete elimination of neo-natal tetanus, (2) decrease of diarrheal disease, (3) decrease in overall birth rate resulting from an increase in the adoption of family planning methods, (4) decrease in infant mortality.

The levels of income and illiteracy remained static or worse after 1968. Furthermore, food intake in quantity and quality decreased, *but the prevalence of malnutrition was almost completely eradicated by 1973*. This somewhat anomalous situation is explained in part, at least, by the following considerations:

1. The possible irrelevance of international minimal nutritional standards when applied to a community with health conditions which are as low as those which obtained in Candeleria.

2. By utilizing better preventive methods and increasing awareness of the population regarding early treatment, the frequency, severity and duration of diarrheal and preventable diseases have diminished to a level where even with "inadequate diet" the whole population is better nourished.

3. The training of every mother to be a promoter within her own family by intermediate personnel from the same community was demonstrated as a basic factor in the success of the project.

The cost of the program was $.40 per person per year at the 1972 exchange rate. The program was extended by the Health Ministry and the Medical School to the City of Cali (100,000 population) and, if successful, may be extended to the whole state of Valle with a population of two million. The new rural program and marginal urban program of the Ministry of Health are based on the experience of the experimental project.

Résumé of No. 9

Village-Based Family Planning in Korea
The Case of the Mothers' Club

by Sea Baick Lee

Framework

The framework for the Mothers' Club approach to family planning was stated by the author as follows:

> There is growing concern in the population literature regarding the apparent failure of most of the purely clinical family planning programs to induce significant demographic change in the lesser developed world. An alternative to the clinical approach is to base the program in the village, and integrate its goals and activities into village level development efforts. The Korean Mothers' Club program is an example of such an approach. The following report is a brief overview of that program, the social setting in which it was generated and the social problems which the Mothers' Club is intended to solve.
>
> The Mothers' Club is not a family planning agency *per se*. Rather, it is an auxiliary entity which integrates family planning into its comprehensive village modernization activities. The formal population program coordinates and supports mothers clubs and operates a family planning bureaucracy, in which field units provide technical and referral support to villages as it is needed.

National Program and Organization for Family Planning

The Korean national policy on family planning was promulgated in 1961 as a part of the national economic development plan. Soon thereafter, 198 county health centers were strengthened and equipped to deliver family planning services. By 1976 more than 1,400 functioning health sub-centers were staffed with one family planning field worker each. These centers and sub-centers are conducted jointly by the Ministries of Health and Social Affairs and the Ministry of Home Affairs. The field workers are females, 20 to 45 years of age, who are high school graduates and have nurses-aide technical qualifications. The primary tasks of field workers are to (1) inform and educate eligible couples regarding family planning and to recruit acceptors and, (2) to provide technical assistance to Mothers' Clubs.

Planned Parenthood Federation of Korea (PPFK)

Alongside the official government program is a private, voluntary activity under the auspices of the PPFK. This organization conducts educational and informational activities *within* the framework of official government policy. The program is integrated with mass media and interpersonal communication channels focused on two major objectives: (1) two-child family, and (2) discouragement of traditional preferences for sons. Funds are provided for the training of Mothers' Club leaders and the publication of a monthly magazine called "Happy Home" which is one of the principal educational materials used in Mothers' Club discussions.

Mothers' Clubs

The Mothers' Clubs are based on the traditional *informal* associations which have long existed for fostering social contacts and for the creation of savings pools. The clubs typically met once a month and were observed to give village women experience in organization and group participation which created a sense of cohesiveness among the members. In 1968 (seven years after the official government program was launched), the PPFK instituted the "Mothers' Clubs" based on the structure and customs noted above. The stated objectives were:

1. To create a local, voluntary movement of mothers to encourage family planning practice;
2. To aid family planning field workers in finding new adopters;
3. To serve as a channel for family planning information and contraceptive supplies;
4. To encourage participation in community development activities;
5. To accelerate interpersonal communication about, and legitimization of, family planning.

As the clubs developed, the programs were expanded to include nutrition, credit unions, community activities and promotion of female equality. The age of members ranges from 20 to 45 years, with no further requirements for membership in the clubs which originally required the ability to read and write. The government covers some of the expenses of the clubs and the training of club leaders is provided by the PPFK. The strategy of the mothers' clubs is to provide an informal contact and communication base for discussions and group encouragement to adopt family planning practices which are attuned to the customs of the Korean rural society with the official government role being essentially supportive. This strategy deviates from other Asian (and other) models which are based on a greater use of paramedics, home visitations, supply centers and other procedures. The strength of the Mothers' Club approach, in summary is that it is organized at the village level. Interpersonal communication and nonformal adult education efforts are conducted by those members. Moreover, those who have a communication role are equipped and encouraged to provide services as well. The program is therefore a service organization which carries both the message of family planning and services to women at home, while reinforcing family planning decisions through the activities of the primary social group. The Mothers' Club program is, therefore, a more comprehensive approach than is utilized in most Asian population programs. Yet because it is decentralized and primarily supported by local resources, it does not place a bureaucratic burden upon the formal population program.

Further, the author indicates that in the past fifteen years, the development program in Korea has mostly consisted of what government has been doing *to* or *for* the people. Now we are beginning to realize that self-development by village people themselves may do more to enhance the quality of life than development administered from outside the village. More than 50 percent of Korean villages now have Mothers' Clubs.

Outcomes

In summary, the following possible outcomes of the activities of the Mothers' Clubs were cited:

1. The family planning program can be legitimized by group activities;
2. Mothers' Club facilitates adoption by making supplies and services convenient;
3. Group activities are facilitating group spirit for family planning adoption;

4. A village-level group plays an important role in facilitating family planning communication within the village;
5. A village-level group promotes development;
6. A women's group activities in the traditional society improves the status of women.

Non-Formal Educational Methods

The non-formal educational methods used are largely based on discussions within the groups—guided and programmed somewhat by the over 1,400 family planning field workers and the monthly publication "Happy Home." The discussions and educational materials are focused on factual information, motivation, creation of favorable attitudes toward and social acceptability of family planning, and assistance to families committed. Mass media programs supplement the above activities but are not believed to be very effective. Although the family planning messages are of primary concern, the clubs have broadened their programs to include community development activities such as village road construction, organization of child care centers and credit unions which help finance personal and community needs. The credit union activities had by 1973 accumulated savings of 1.7 million dollars (U.S.). There is reason to believe that economic planning fosters fertility planning.

Conclusion

In conclusion, the Korean Mother's Club program is a fundamentally new family planning strategy which combines community development and social activities with family planning services and non-formal educational communication efforts. The great strength of the program is its utilization of village opinion leaders and traditional social ties.

As to the replication of the program elsewhere, the belief was expressed that success in other settings would depend upon the existence of an organization with strong ties to village level primary groups and the overall capacity to train groups in diverse group activities. But the organization of such groups is not considered an unattainable goal—since most if not all societies have traditions of leadership, organization, communication and education at the village level which can be a great resource to the national family planning program.

Chapter 6

Non-Formal Education in Rural Development in Ecuador Guatemala and Botswana

Editor's Note

The following résumés of the Rural Education Project in Ecuador and the Basic Village Education Project in Guatemala are examples of experimental "consciousness raising" and controlled communication-type projects involving large numbers of villagers. The project in Ecuador is particularly distinguished for its creative use of games and other discussion devices to build confidence and motivate villagers to participate more effectively in development activities. The Basic Village Education Project in Guatemala is a scientifically designed project using varying combinations of communication and technical assistance devices to inform and stimulate villagers to participate in agricultural and other development activities.

Although only two years of the projected experimental three-year program have been completed, the tentative findings are already suggestive of some significant information about the role of communication and non-formal educational methods in accelerating the adoption of more productive agricultural practices. The material on the Ten Basic Principles for the Transfer of Technology is a useful checklist on this significant topic.

The transcribed remarks of Patrick Van Rensberg on the "Botswana Brigade" Program describe his philosophy of development and his efforts to develop a more realistic program of education and trades training for rural youth of Botswana within the formal school system. Having failed in this approach, he evolved an alternative nonformal program of trades training and production outside of the formal school system. The Botswana Brigade program is now formally recognized and supported by the Botswana Government.

Résumé of No. 10

The Ecuador Non-Formal Education Project

by Edgardo Rothkegel Ortuzan[1]

Background and Principal Concepts of the Project

The Ecuador Non-Formal Education Project grew out of a fortuitous set of contacts in 1970 between several members of the Center for International Education at the University of Massachusetts and a group of Ecuadoreans and Americans in the USAID mission in Quito. Informal discussions led to the realization that both groups were dissatisfied with the focus on the formal educational system as the major vehicle for human development. After a survey of non-school educational efforts in the country and much discussion with concerned private and government people in Ecuador, a contract was signed with the University of Massachusetts to begin experimenting with non-formal education approaches which focused on "consciousness raising" of the campesinos in specific localities of rural Ecuador. During the following three years of the contract a wide variety of activities took place. These efforts form the basis for the present paper which attempts to highlight the major features of the project and to share what we feel would be most useful to those who would attempt similar activities in their own settings.

From the beginning, the project staff was committed to a set of values which shaped the behavior and activities of the project. Perhaps the most crucial of these values in the initial phases of the project was the emphasis on *Ecuadorean staffing and participation*, coupled with a low and gradually decreasing North American profile in the project. From the beginning the field staff was headed by an Ecuadorean, and at no time was there more than one North American resident in the field.

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[1] The author indicated that his paper would not cover details of the project, which are well documented in publications referred to in the bibliography at the end of this résumé. The editor was assisted in the preparation of this résumé by James Hoxeng.

A second commitment resulted in the selection of Ecuadoreans for the staff *who were themselves products of the communities in which we were working*. Thus both of the field coordinators were Quechua-speaking members of Sierra communities who came to play a major role in the development of the *facilitator* approach to non-formal education. Bringing the perspective and experiences of a group of socially committed Ecuadoreans directly into the core of the project was perhaps the single most important factor in producing the results which followed.

The project can best be understood as a series of sub-projects loosely linked together by a common staff, and a corresponding similarity of basic philosophy concerning goals, staffing and processes. The sub-projects had individual timelines which overlapped as new ones started and old ones were concluded. Sub-projects included educational games designed to increase the participation of campesinos and to improve literacy and numeracy skills, photo-comic books, and the cassette tape recorder project. In any particular village setting, some combination of the various techniques and approaches would be selected for use. Later efforts combined a wide variety of the techniques into a single vehicle, which in that case was used as a means for achieving initial contact with the village and stimulating their interest.

The three years of the project involved a focus which shifted from creation and experimentation with methods during the first year, to an emphasis on finding and testing delivery mechanics in the second year, to consolidation and summarizing these experiences during the third year. Continuing throughout this time period were two general programmatic thrusts: creating and testing an approach to working with village facilitators, and adapting materials and methods to be usable by the Adult Education staff of the Ministry of Education. These two avenues of approach were used throughout three years and continue on in a modified form at present, under the aegis of the Ministry of Education.

More specifically, the goals of the project during these years were to:

1. Explore mechanisms to extend educational opportunity to those presently outside the formal educational system;

2. Create materials and processes which would put into operation some emerging tenets of non-formal education (especially participation and dialogue);
3. Experiment with learning delivery systems that would reach remote campesino communities in rural Ecuador;
4. Provide learning materials to rural communities with the purpose of inculcating literacy, numeracy and communication skills;
5. Explore the formation of a national network of learning situations and the training of educational facilitators in rural Ecuador.

The non-formal educational materials created and field tested by the project were all designed for "consciousness raising" and increased participation of campesinos in community functions and decision making. Simulation and dialogue techniques were emphasized. A variety of games were developed such as letter and number dice, word rummy, math bingo and other games to increase literacy and numeracy skills. An adaptation of the Ashton-Warner dialogue technique and a highly successful "Hacienda" game (which involved play-acting of characters such as local lawyers, bankers and political bosses familiar to campesinos) were designed to combat campesino apathy and reluctance to express themselves. Radio educational material, photo-comic books (fotonovela) and a mobile educational fair involving puppet shows were also developed and utilized. All materials were freely available to anyone who wanted to use them.[2]

Motivating Philosophy of the Project: the Goal

The motivating factor of the Ecuador Project was to help the Ecuadorian peasants to liberate themselves. First, to implement a system of approach that would break the typical characteristic related to education—that of its verticality. Second, to facilitate an authentic reflexive-critic dialogue, an authentic praxis. This constituted the mission, the external goal.

Inspiration for this philosophy was drawn from Paulo Freire's book, *The Pedagogy of the Opppressed.*[3] Freire insists time and again that "the oppressed, the people, have to liberate themselves without ever expecting the oppressor, i.e., the dominant institutions, to do it for them. In fact, this would constitute a complete contradiction. In order to liberate themselves, it is necessary for the oppressed to gain the political power which is denied to them as members of the oppressed group."

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[2] A bibliography of "technical notes" and other materials on the project which are available to interested readers follows at the end of this résumé.

[3] Paulo Freire, *Pedagogy of the Oppressed*, New York: Herder and Herder, 1970.

A first step in designing a program in Ecuador, in accordance with Freire's philosophy, was for the staff to rid themselves of some of the cultural/educational hang-ups which would interfere with their being able to do a realistic job. More specifically, the staff, having been formally educated, had to become accustomed to working in a nonformal education setting using NFE methods and theories. The staff were "educated" (schooled) and consequently carried the typical characteristics of an educated person.

The project activities, all geared toward providing campesinos with tools for their own education and their community's betterment, were activities designed to bring about, constantly, ways to be authentic, ways to be themselves, ways of self-analysis, self-criticism, and self-liberation—in Freire's terms "to be" rather than "to be like."

The project staff believed fundamentally that an education program based on the liberation of the individual has to look to his/her participation in his/her own education. Through these activities an internal process of self-awareness was initiated among the staff; a process of self-reflection that prompted them to question even their own mental categories was inculcated in all members of the staff. The staff found themselves changing and growing through helping the Ecuadorean peasants to liberate themselves, by dealing with something which they could visualize as necessary for their own upgrading while maintaining a level of equality in relation to the staff.

Some Aspects of the Ecuadorean Reality

The "Ecuadorean reality" provides a massive challenge to any group which attempts to plan a nonformal educational program to deal with some of the realities. Some of the more important of these realities follow:

1. The population of Ecuador is approximately 6.5 million, composed of 40 percent Indian, 40 percent Mestizos, 10 percent black and 10 percent white, socially stratified along racial lines, with attitudes inherited from the Spanish colonization. The majority of rural people are illiterate. Approximately two-thirds of the population live in rural areas.

2. Land and income distributions are very inequitable. In 1950, for example, approximately one quarter million properties (73 percent of the total) were less than five hectares. At the same time, 241 properties, 0.7 percent of the total, had an average of more than 6,000 hectares. This situation was changed, however, with the promulgation of the Agricultural Reform law in 1963 which, by 1968, had increased the minifundios of 5 hectares or less to 708,000 and by 1974 to 903,000. Although these figures tend to indicate considerable progress, this increase has meant little to the peasant in terms of entering any kind of produce market, and has thus had little effect on the basic lifestyle of the peasant. The difficulties of product marketing, the low quality of the land available for such farms, and the oppression to which the peasant is subjected confront the rural family with the choice of living at subsistence levels or migrating to the cities. Many families have moved to Quito and Guayaquil. Unemployment, juvenile delinquency and other social problems have resulted from this influx.

3. Communities of Indians who live in the Andean mountains or the Oriente jungle are still subject to the remainders of feudal institutions. The fact that Ecuador has depended (until the recent discovery of petroleum) largely on coffee, cocoa and bananas for exports, controlled by large agribusiness enterprises, has generally worsened the situation. In the area of formal education, a number of problems which are generally characteristic of developing countries are prevalent: (1) lack of funds for classrooms and teachers in accordance with the needs of the population, and (2) alarming dropout rates as exemplified by the fact that between the years 1962-67, 86.8 percent of the school children in the rural areas dropped out of school before they reached the sixth grade, not counting the children who never got to school to be counted as dropouts, possibly one quarter of all children in rural areas.

Evolution and Development of the Project

A singularly important aspect of the project was the fact that the original idea of dealing with the rural population of Ecuador was generated and developed by a group of Ecuadorean professionals who were interested in social development. It was not a "foreign" idea imposed from without, "sold" to another country, and then imposed on the people of that country. This group sought out personnel at the University of Massachusetts who joined in the development of the project.

A second step was taken in the summer of 1971 when a study was undertaken with the financial assistance of the U.S. Agency for International Development Mission in Quito, of the different programs and projects involving extra-scholastic activities. One of the programs studied was the Program of Adult Education of the Ministry of Education of Ecuador. This study concluded that many institutions were involved in out-of-school educational activities, that it would be impossible to bring all the diverse institutions and programs together to form a cohesive plan of attack and service delivery system, and that there was a great deal of interest in attempting to implement new methods.

As a result of this interest, a contract was entered into between the Ecuadorean Government, USAID/Quito and the University of Massachusetts. Essential elements of this contract were: (a) the production of nonformal educational materials, (b) the testing of these materials for and with these institutions, and (c) making these materials and methods available to interested people and groups. These materials, in turn, were to be used to create or rediscover methodologies in order to produce a process of learning-growing as opposed to that of learning-dependency, and to prove that such a process had its validity as an instrument of social change. Stated in other terms, these materials (which were produced inexpensively) were designed: (a) to help develop in Ecuadorean peasants the self esteem necessary to become an instrument of their own social change, and (b) to produce and use methodologies which promote and encourage such liberation and self esteem.

A central strategy of the project (in addition to the production of materials which could be used by persons not technically trained in education) was the recuitment, selection and training of "facilitators" who would serve as implementers of the project. Facilitators, who were required to have completed the third grade as a minimum, were selected from their communities, trained in the philosophy of the project and the use of nonformal educational materials which were produced to foster the educational processes with community groups. Or stated more elegantly, the facilitator was intended to help erase the dichotomy between the teacher (knowledge), and the student (ignorance), and to help transform the vertical relationships of formal education into horizontal relationships. The facilitator introduced the educational games, the simulation games, and the fluency activities.

The facilitator became the essential mechanism and the center of the process itself and the activities of the project. He constituted, within himself/herself the destruction of the myths that the educator brought the knowledge and the student brought only emptiness that the teacher must fill, that the peasant was an object that could be actualized by education. On the contrary, the peasant was demonstrated to be a somebody with an enormous potentiality of self affirmation, self esteem, and a profound sense of his role in bringing about the changes which his community now finds necessary.

As indicated, the facilitators were selected by their communities through direct election, although some modifications were introduced. The project staff set up certain minimal qualifications. Once the first generation of facilitators began to function and their work among the communities was appreciated, new commitments were generated and other communities expressed a desire to have facilitator-representation of their own members.

The first facilitator training lasted five weeks, with initial focus on exercises in group dynamics and games designed to achieve confidence and mutual respect on an individual basis, the spirit of solidarity at the group level, analytical knowledge of the social forces that affect the rural life and the practice of critical skills related to group reflection and conscious awareness. In other words, the future facilitator was subjected to a type of training which not only helped him to become consciously aware of himself and his surroundings, but also helped him to become an instrument of action in his role as facilitator through use of some of the same techniques.

Later training consisted of surrounding the participants with working experiences in the educational concepts and the materials developed by the program. The facilitators were introduced to the creation of and the participation in social-theatre. They were shown the use of literacy materials, and were introduced to the generating themes of P. Freire. They also learned how to work in groups, how to deal with authority, and so forth.

A variety of problems arose in the course of experience with facilitators, as briefly indicated in the following comments: A major problem of relationships arose between the facilitators and their communities when they returned after training. Part of the problem, apparently, was that the facilitator, as a result of the "adaptive changes" which he had experienced during training, came to see the problems of the community in a new light. This situation confirmed the initial decision of the project staff that two or more facilitators be elected from each community, so that the whole weight would not rest on one person's shoulders.

A second problem involved interpretation of the motives of facilitators who went to work in communities other than their own, even when invited to work in these communities. This problem arose most clearly in 1975 when the Ministry of Education decided to use unemployed teachers (10,000 in 1975) as facilitators. This brought the project back against the old problem of sending outsiders to the communities, and the absence of commitment to the horizontal structure which had been so carefully cultivated.

Developments 1975-76

Developments during this period are characterized as the "quasi-institutionalization" of the project. The final contract, although involving the Ministry of Education directly with the other parties to the contract–USAID/Quito and the University of Massachusetts, never brought the project completely within the Ministry. A specific aspect of the contract was that most of the central staff of Quito were employed under the University of Massachusetts (instead of the Ministry of Education, or jointly by the three parties to the contract), even though the production of materials was carried out by the Department of Educational Technology of the Ministry. The nature of the contract (or the ideas behind it) created a growing concern among the staff of the project of the need for a full institutionalization of the methodologies within the rural areas of Ecuador. Some of the questions raised were the following:

1. What was going to happen once the contract expired?
2. Who was going to continue to support all those facilitators who were so eager to continue work?
3. Who was going to facilitate the training of new facilitators?
4. And, most important of all, why shouldn't this method be expanded to include all of rural Ecuador?

Some of these questions are partially answered by the fact that since involvement of the University of Massachusetts in the project ended in June 1976, activity has increased in the four participating provinces. The number of participating communities has grown from 240 in early 1976 to a current total of 444.

A variety of community improvement activities (aided and abetted by the facilitators), the groundwork for which was begun in the fourth year of the project, have been continued and expanded in the ensuing period. Some of them, such as establishing community schools and bus service, or obtaining electrical services, have required persistent representations and dialogue with government officials. Other community activities, such as making road and bridge improvements, equipping night guards with carbines, securing a running water supply, or improving community drainage, were more quietly achieved.

The government of Ecuador has now developed a plan for a national non-formal education program growing out of the experimental work described above, as the promise of return to elected government in 1978 has sparked interest in having an informed, literate voting population, especially in rural areas.

Ecuador Project Reports

The following documents are available from the Center for International Education at the University of Massachusetts, Amherst, Mass.

Technical Notes (undated)

David R. Evans and James Hoxeng, *Technical Note No. 1: The Ecuador Project*. Discussion of basic goals, philosophy, and methodology of a rural nonformal education project, 23 pages.

William A. Smith, *Technical Note No. 2: Concientizacao and Simulation/Games*. Comments on Paulo Freire's educational philosophy, and discussion of the use of simulation games for consciousness raising, 26 pages.

James Hoxeng, *Technical Note No. 3: Hacienda*. Description of a board game simulating the economic and social realities of the Ecuadorian Sierra. (Also known as "The Game of Life"), 18 pages.

Jock Gunter, *Technical Note No. 4: Market Rummy*. Description of a Market Rummy card game which provides fluency practice in basic market mathematics.

Jock Gunter, *Technical Note No. 5: Ashton-Warner Literacy Method*. Description of modified version of Sylvia Ashton-Warner's approach to literacy training used in Ecuadorean villages, 15 pages.

Jock Gunter, *Technical Note No. 6: Letter Dice*. Description of letter fluency game which uses simple participation games to involve illiterates in a non-threatening approach to literacy, 17 pages.

Jock Gunter, *Technical Note No. 7: Number Bingo*. Description of Bingo-like fluency games for both words and numerical operations, 15 pages.

Jock Gunter, *Technical Note No. 8: Math Fluency Games*. Description of a variety of simple fluency games which provide practice in basic arithmetic operations.

Jock Gunter, *Technical Note No. 9: Letter Fluency Games*. Description of a variety of simple fluency games which provide practice in literacy skills.

James Hoxeng, *Technical Note No. 10: Tabacundo*. Description and analysis of the impact of cassette tape recorders as a feedback and programming technique in a rural Ecuadorean radio school program.

Patricio Barriga, Carlos Moreno, Enrique Tasiguano, and Valerie Ickis, *Technical Note No. 11: Facilitator Model*. Description of the facilitator concept as an approach for community development in rural Ecuador.

Carlos Moreno and Carla Clason, *Technical Note No. 12: Theater and Puppets*. Description of the use of theater and puppets as a tool for community dialogue and participation.

Patricio Barriga, *Technical Note No. 13: Fotonovela*. Description of the development and use of the fotonovela as a tool for literacy and community consciousness raising.

Overview of Project

James Hoxeng, *Let Jorge Do It: An Approach to Rural Nonformal Education*. Amherst, Mass.: Center for International Education, University of Mass., 1973.

A. M. Ochoa, *Survey of Gaming Materials–Ecuador Project*, Center for International Education, May 1974.

D. A. Swanson, *The University of Massachusetts Project: An Evaluation of Nonformal Education in Ecuador*. Quito, Ecuador: U.S. Agency for International Development, 1973.

Articles

Patricio Barriga and Enrique Tasiguano, "Educacion No Formal," *Educacion Hoy: Perspectivas Lationoamericanas*, Diciembre-Febrero 1973-74.

Christian Science Monitor, The, "What's Happening in Ecuador," February 13, 1974.

David R. Evans and Arlen Etling, "Don't Look Now Chairman Mao: We're Preparing Facilitators to be Nonformal Educators," *Mcforum*, Fall 1974.

Arthur Gillete, "Review of Ecuador Project Film," *Prospects*: Quarterly Review of Education, Vol. IV, No. 1, Spring 1974.

Jock Gunter, "Education Media for Rural Ecuador," *Audiovisual Instruction*, October 1973.

Interaction, "Entertainment as Education," Vol. II, No. 2, November 1974.

Helen W. Nash, "Games for Living," *War on Hunger*, December 1973.

Helen W. Nash, "The Show Goes On," *War on Hunger*, September 1974.

William Smith, Alfred Alschuler, Carlos Moreno, and Enrique Tasiguano, "Critical Consciousness," *Mcforum*, Spring 1975.

William Smith, "Hacienda/Simulation," Discussion Sur L'Alphabetisation, *Printemps*, 1974.

Other Ecuador Project Publications

Ecuador Project Staff, *Nonformal Education in Ecuador*. Amherst, Mass., Center for International Education, University of Mass., 1975.

Arlen Wayne Etling, *Characteristics of Facilitator: The Ecuador Project and Beyond*. Amherst, Mass., Center for International Education, University of Massachusetts, 1975.

William A. Smith, *The Meaning of Conscientizacao: The Goal of Paulo Freire's Pedagogy*. Amherst, Mass., Center for International Education, University of Massachusetts, 1976.

Résumé of No. 11

The Basic Village Education Project: Guatemala

by Edgar G. Nesman[1]

Objective and Background

The Basic Village Education Project (BVE) is a most carefully designed and evaluated experiment in the uses of modern communication and agricultural extension techniques to inform and influence subsistence farmers, most of whom are illiterate, in two areas in Guatemala, and to adopt changes in their agricultural practices for the purpose of increasing their production and welfare.

More formally, the objectives of the project as stated in the Implementation Plan prepared in August, 1973, are stated as follows:

To determine effectiveness and relative costs of different mixes of communication media used to supplement the work of extension agents (limited in number) in influencing change in agricultural practices and production among the Ladinos and Indians of rural Guatemala.

Supplementing the overall statement of project objectives is the following, which expands on certain aspects of the rationale for focusing on communication and agriculture in the project.

In planning this experimental program, it was recognized that the effectiveness of communication media can be measured only where there is a possibility for change in a relatively short time. That is, there must be both the potential for improvement, and the infrastructure to provide the means for improvement. After careful consideration of subject matter areas such as health, education, sanitation and agriculture, it was determined that the above preconditions were most nearly met in the field of agriculture. Therefore, agriculture was selected as the principal focus of the program, and since another criterion was to develop an educational program which did not initially require literacy, the primary audience was the illiterate subsistence farmer. Finally, two widely different areas in Guatemala were selected—the region of Spanish-speaking Ladino farmers in southeastern Guatemala (Oriente) and the Quiche-speaking Indians of western highlands (Occidente).

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[1] This résumé is based on an oral presentation of the project by Dr. Edgar G. Nesman, Co-Director of the Evaluation Component of BVE at the University of South Florida, and from several reports on the project published by the Academy for Educational Development which are noted at the end of this résumé.

A second objective is the training of a cadre of Guatemalans in planning and administering regional and national programs in modern communication technology to reach more people effectively in development programs.

The plan encompasses three years of experimentation in the Oriente and two years in the Occidente. Although there are significant language and cultural differences between the two areas, which are taken into account in the experimentation, the participants in both areas have significant characteristics in common: small land holdings (90 percent have less than 7 hectares); extreme poverty (more than 80 percent earn less than the estimated national per capita income of $319); high incidence of illiteracy (less than 50 percent of persons fifteen years or over are literate); low productivity and use of agricultural inputs; and high incidence of respiratory and other diseases. The differences in the regions, however, provide an opportunity to study the role and effectiveness of modern communication technology and non-formal educational methods in two distinctly different settings with the possibility for making cross-cultural comparisons.

The project is under the administrative supervision of the Ministry of Education which works in close coordination and collaboration with the Ministries of Agriculture and Health. Technical backstopping is provided by the Academy for Educational Development which has subcontracted with the University of South Florida for independent evaluation of the project results. The principal funding for the project is provided by the Agency for International Development through contract No. AID/la-C-73-19 with the Academy for Educational Development, with additional support provided by the Guatemalan Ministries of Education and Agriculture.

Planning and Preliminary Studies

Approximately ten months were utilized in acquiring base line data, in the development of a strategy for, and the major components of, the nonformal educational and communications program, in the selection of the experimental and control areas, and in the selection and training of the key staff members for the project. The base line research involved hundreds of on-site interviews with farmers selected randomly in both experimental areas in terms of such critical items as land tenancy patterns, cropping systems, production levels of key crops, harvesting and marketing practices, use of farm credits, technical information and other services currently available, mobility, health and nutrition and related subjects. The educational-communication program was developed around the concepts that there would be no captive audiences, that the messages had to be quite specific, and would take account of the data about cultural practices, problems and other considerations found in base line surveys. The agricultural procedures and practices and investments which were advocated would have to be practical, profitable, flexible to adjust to changing weather and other conditions, within the ability of farmers to utilize and with minimum risk.[3] Staff training of writers, graphic artists and others involved in the production and testing of radio scripts, flipcharts, outlines for radio forums and other educational materials in light of the above considerations and requirements comprised the third aspect of the planning stage of the experiment.

Experimental Treatments

The communication and nonformal educational treatments in several subareas and communities in the two major experimental areas involved radio messages alone (R), radio and monitors (RM), radio, monitors and agronomists (RMA), and monitors only (M). Control areas made up of farmers having similar characteristics, land holdings, etc., were selected for each of the experimental areas.

Radio Alone

Radio programs are broadcast six days a week for eight hours from 5:00-9:00 a.m. and 4:00-8:00 p.m. The program is a mixture of information on health, topics of general family interest, local news, music and thirty minutes of agricultural information. The agricultural information is broadcast under the name of "Revista Agricola" and typically features two to three ideas keyed to specific aspects of the agricultural cycle drawn from an annual message calendar. The types of messages include short interviews with progressive farmers or experts, excerpts from a continuing radio novel, short round table discussions and summaries by the announcer. On Saturdays radio forums (supported in some areas by monitors whose functions are described in the next section) are broadcast in the morning and afternoon.

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[3] An excellent summary of ten basic principles of technology transfer, prepared by Howard E. Ray and Jose Luis Monterosso and published by the Academy for Educational Development, is appended to this résumé.

In an audience survey made in November, 1974, in one of the experimental sub-areas the following facts were found: (1) 85 percent of the farmers interviewed listened every day of the broadcast week, (2) the favorite program of 88 percent of the men was "Revista Agricola" for the benefits which they believed that they had received, and (3) 50 percent of the farmers interviewed indicated that neighbors and others joined them in listening to the broadcasts, thus expanding the coverage of the broadcasts.

Radio and Monitors (RM Treatment)

Monitors for the experimental areas receiving the "RM" treatment are agriculturally oriented persons who are chosen from the rural communities in which they work. Each of the monitors works full time in five communities of from 300-400 farm families. They were initially given one week of orientation, later increased to one month (pre-service) training in project purposes and procedures. They continue to receive in-service training for one-half day each week and from one to two days each month. The weekly training sessions are conducted by the supervising agronomist who reviews the educational material to be used in radio forums in the following week and in detailed explanation of the technical content of the radio messages. In addition to the radio message, the monitors are provided with twenty-minute cassette tapes and flipcharts and other educational materials which are keyed to and which reinforce the radio messages and aid in conducting discussions.

In addition to organizing and leading weekly farm forums in each of the assigned communities, the monitors perform the following functions: (a) visit with and assist farmers and small nonformal farm groups in relating radio messages to their interests and needs; (b) providing weekly feedback reports to the producers of radio programs and educational materials of farmer reactions to the messages, questions and problems raised in the farm forums and visits, and other information on weather and crop conditions, changes taking place in the communities and other relevant information (This function is regarded as very significant for the improvement of the educational message.); (c) setting up simple "strip demonstrations" of a few rows of crops on which one or two improved practices are applied, and (d) recruiting and working with volunteer helpers from each of the radio-forum groups.

Radio-Monitors-Agronomist (RMA Treatment)

One agronomist is assigned to each of the experimental areas of about 600 rural families. The agronomists have received training at the junior college level with specialization in agronomy. Their principal functions are to: (a) reinforce the work of the monitors, (b) conduct crop demonstrations, (c) identify technical problems and provide feedback to the central supervisory and materials production organization. With reference to the first function, the agronomists provide in-service and supervisory assistance to monitors, visit farms with them, attend some of the radio forums and supplement the remarks of the monitors. One complete crop demonstration is set up, with the assistance of monitors, at the beginning and end of each harvest season in each area under treatment, covering key elements such as seeding, fertilization and insect control. A manual covering both the method of setting up demonstrations and the measurement of results is supplied to each agronomist. The problem identification and feedback functions cover such areas as insect and disease control, droughts, credit and other inputs, marketing and other problems experienced by the farmers—some of which are handled locally and some referred to central authorities.

Local Monitors Only (Treatment M)

One community in each treatment area is served by local monitors *only*—no radio or agronomic services. The monitors use some of the audio-visual materials and provide feedback.

Control

A separate area in each of the experimental areas (Oriente and Occidente) receives no educational services whatsoever as a control in comparing induced change against natural change.

Summary of Findings

(from "Third Interim Report Evaluation Component, July, 1976")

A summary of findings for the first two years of experimentation in the Oriente region follows in the form of answers to key questions regarding the effectiveness of several components of the educational program. The reader is warned that all findings in this interim summary should be considered tentative and incomplete. Final conclusions should not be drawn until complete data are available at the end of the project.[3]

1. *How effective is the radio?*

At this time of measurement the radio appears to be a powerful instrument for changing knowledge, attitude and practice (practice, contrary to the literature). This is probably due to the extremely effective field programming which has been geared specifically to local needs. The radio itself is localized and felt to be a part of the community. Some difference may be found which would clarify this when Yupi and Quezada are compared with the final data, since in Yupi the radio may not be seen in the same personal way. The question might be raised as to whether the particular style of this experiment has created a radio system which is in fact a personal communication system rather than the impersonal broadcaster of knowledge ordinarily described.

2. *How effective is the monitor?*

The overpowering strength of the radio may be disguising some of the impact of the monitor, but monitors are reported with increasing frequency as sources of knowledge and seen to be reinforcers. In one area, the radio monitor seems to be operating at less than optimal effectiveness, but this may be as equally related to peculiar differences in the population which were not revealed in the matching procedures.

3. *How effective is the agronomist?*

In the year-end surveys the agronomist is increasingly mentioned as a source of information and assistance to the subjects. In the time-sample studies he is rarely or never mentioned. Since the year-end is the more complete study with a number of questions concerning the agronomist, the increasing usefulness of personal contact with the agronomist is probably more accurately reflected there. Also it is likely that the farmers do not always distinguish between a monitor and an agronomist since they do play somewhat similar roles, and this may be another confounding effect.

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[3] Final reports of the BVE project are expected to be published in mid-1978.

4. *How effective is the radio forum?*

The answer to this must come in part from the effectiveness of the monitor and also from the attendance studies presently undertaken. It is difficult to separate the effectiveness of the radio forum from the effectiveness of the monitor since it is a tool of the monitor. The results of radio-forum study show that the farmers that attended were those that already had a high level of practice but that the attenders did not change as much as non-attenders in 1975. The three high-change farmers selected for individual study had all attended the radio forum.

5. *How effective is the experimental plot?*

Modification in questions from this year have been made to see if farmers will or do mention being influenced by the experimental plot. Very little data exists to support the plot as an effective change instrument, but the field impression is that it is visited and influences many people.

6. *Is literacy and schooling important for the program to be effective?*

Literacy does not seem to be an important factor in the change that has taken place in Oriente in 1975. High-practice level farmers are more likely to be literate but high-change farmers are not. The literature search indicates that we must have better measures of family literacy since an illiterate head of household with a literate family member may have an equally good source of information at this point. This should be more effectively defined by the addition of the family literacy question for the 1976 data.

7. *What do high change farmers look like?*

The farmers that have a high-level of agricultural practice in 1974 also have high crop yield expectations, own more land, have larger families and are more likely to be literate. The farmers that made the greatest change (improvement) in 1975 do not have all the same characteristics as the high level farmers. They also have high expectations for crop yields but there is no relationship shown on land ownership, family size or literacy. From this, it appears that literacy and land ownership were important elements for better farming in the past but the recent improvements do not depend on these elements. Farmers who have changed their agricultural practices in spite of their lack of literacy and land ownership have undoubtedly been affected by the BVE program.

8. *What practices have changed the most as the result of the BVE?*

The agricultural practices that changed the most in 1975 were: selection of seed corn; use of fertilizer on corn at flowering time; use of fertilizer on corn at seeding time; and use of fungicides. These practices were used only at a moderate level in 1974. Further analysis of the data is required to see which practices are most important for higher crop yields.

9. *What benefits have the farmers received from the program?*

Documented benefits from changes in knowledge, attitude, and practice are now apparent in both Quezada and Yupi and also emerging in the monitor area in Ipala. Significantly higher yields were reported from 1974 to 1975.

10. *What further change can be expected in the future?*

There appears to be a readiness effect taking place which must await confirmation of future data. Those areas with low practice scores moved significantly but slowly in their first year of programming. The second year, and potentially for the third year, the increases may be non-arithmetic but more on a logarithmic scale. Certainly in terms of potential for yield and production, farmers could triple their present output.

11. *What can be expected from the Occidente?*

The general level of practice in the Occidente is most similar to that found in the Yupi area in the Oriente. The analysis of the 1974 and 1975 survey data confirms a pattern related to natural change from the varied conditions of the agricultural year without the benefits of an educational program such as BVE. Change similar to that in Yupi in 1975 should occur with the addition of the BVE program in 1976.

References

(All reports are available from the Academy for Educational Development, 1414 22nd St., N.W., Washington DC, 20037, at the prices indicated.)

1. The Basic Village Education Project: "The Setting and the People." ($0.25)
2. The Basic Village Education Project: "Transfer of Technology," by Howard E. Ray and Jose Luis Monterroso ($0.55)
3. The Basic Village Education Project: "Mixes of Communication Media Utilized in the Project." ($0.75)
4. The Basic Village Education Project: "Third Interim Report, Evaluation Component," University of South Florida, July 1976 ($5.00)
5. The Basic Village Education Project: "Third Interim Report, Field Operations," June 1975-June 1976 ($5.00)

Ten Basic Principles—Transfer of Technology

(From a report prepared by Howard E. Ray and Jose Luis Monterroso, Program Leader and Agricultural Sector Coordinator, respectively, of the Basic Village Education Project)

1. *Information is not enough*

Obviously, technology must be available before it can be transferred. However, the fact that it does exist, and that the farmer is convinced that it is good, in no way insures that he will use it. Getting the information to him, and convincing him of its value is only the first step. Also essential are the necessary goods and services to permit him to use it. For example, he may be convinced of the need to use fertilizer or insecticide; but if he cannot obtain credit, or the desired input is not available, or if he cannot sell his products at a price high enough to justify his investment in such input, he will not use it.

2. *A rose is not a rose is not a rose*

It is not sufficient to think in terms of "farmers." Even within a given community, farmers vary in their knowledge, in their receptivity to new ideas, in their resources, in the quality of their land, and so on. Consequently, their ability to take advantage of new technology also varies. That variability must be recognized and dealt with in any program whose goal is to encourage the transfer of technology.

3. *Never at point zero*

Consciously or unconsciously, a serious error is frequently committed in thinking that the small illiterate subsistence farmer knows little and cares less. Nothing could be further from the truth. Over the generations, the subsistence farmer and his forefathers have developed a survival package of technology that has permitted him to persist within the limitations of his environment. Before attempting to change *what* the farmer is now doing, it behooves the change agent to study *why* he is doing it, and whether the new technology will, in fact, be of long-term advantage to him. For example, conventional wisdom in some regions says to plant a single crop in a field to permit the very best possible management practices for that particular crop. Yet recent evidence in the highlands of Guatemala indicates that corn production (where chemical fertilizers are not available) can be maintained at a significantly higher level when beans are interplanted with the corn. And Guatemalan farmers have been doing this for generations.

4. *Never a "corporation" farm*

The farmers with whom we are concerned do not act as a single unit. Rather, each is an individual decision maker—in Guatemala, that means that we must deal with some 400,000 individual decision makers.

5. *Feasibility tests are tough*

Do not expect successful transfer of any piece of "improved" technology unless it can successfully pass at least three feasibility tests. First, and most obvious, it must be sound technology. Second, it must be economic. Third, it must be practical—that is, it must be something that the farmer can use within the limits of his resources, his culture, and his environment. It is the third test of feasibility that is so often neglected, and which results in failure to achieve successful transfer.

6. *Not a gambler*

The small farmer does not gamble on his milpa—he cannot afford to. If he is to use fertilizer, he must obtain credit. If his production is not increased to the point where he can feed his family and have enough left over to repay his loan, he stands to lose his very means of survival. Thus, we must add a fourth test of feasibility. That is, the new technology must be dependable, and not subject the farmer who uses it to an increased risk.

7. *Static—NO, Dynamics—YES*

Even though the farmer may be steeped in tradition, and do things the same way year after year, his situation is never static. The rains are good one year, and fail the next; they begin early one year and late the next. The price he receives for his product is high one year and not so high the next. He can obtain fertilizer at a reasonable price one year; but the price may be higher the next year, or he cannot obtain the fertilizer. Therefore, the package of technology that is best for him must be constantly changing. This factor becomes even more important as he moves from the traditional toward a modern agriculture.

8. *The MAN is the thing*

The farmer himself is the key to improvement. It is his ability to manage his few resources, including the information he receives and the technology which he adopts, which will determine in large part the benefits which accrue.

9. *It's the details that kill you*

If you wish to introduce a seed, making the seed available to the farmer is only the first step. The farmer must know also how to manage that seed to take advantage of its genetic potential. What spacing should he use? How deep should he plant it? When should he plant it? How should he fertilize it? What insect or disease problems should he anticipate? Does it have any peculiar characteristics which will necessitate a different harvesting method or time? What is its market? Or, if for home consumption, can it be prepared and consumed in the same way as the seed he was using previously? Will its taste and texture be acceptable? A similar series of questions can be raised for nearly any new practice that might be introduced. Failure to understand and give appropriate attention to even one detail may result in unsatisfactory results from the standpoint of the farmer.

10. *It takes a lot of rocks to make a road*

In short, the transfer of technology is not likely to change a highly traditional agriculture to a highly modern agriculture overnight. It must come step by step, little by little, gradually building on improvements made earlier. Only after the farmer has gained the knowledge, has accepted the idea, and has the resources which he needs to put it into practice, will he use a new technology. The same process must take place for every bit of new technology introduced. However, if the farmer has success with the first improved practice or new input which he uses, he will be more receptive to the second, and even more so, the third and subsequent introductions of new technology. It is a case of starting where the farmers are, and moving slowly and dependably to obtain their confidence; to help them to continue to increase their production, income and level of life.

No. 12

The Serowe Brigades: Seeds of an Alternative Education

by Patrick Van Rensburg

Before describing the program and the philosophy underlying the Serowe Brigades in rural Botswana, I would like briefly to say how the experience of fourteen years has shaped them. My own starting point was to share the common assumption of that time, that education was a necessary part of development. What it needed was reform and the most rapid expansion possible. The aims of reform should be to inculcate commitment in students to service of the rural poor and to provide them with skills and knowledge with which to carry out such service. Schools could be expanded more rapidly by making better use of available resources and by involving students in construction of school buildings and equipment. At Swaneng Hill Secondary, which I founded in 1963 from scratch, we introduced studies in development into the curriculum, and we taught the students building science, carpentry, metal work, technical drawing and agricultural science—skills they used to develop and maintain the school with staff assistance and supervision.

Within two years came the recognition that resource constraints underlay the inadequate facilities required to educate and train all our young people. The Brigades resulted from that recognition. They are a combination of work-place and training. They undertake serious production and the production is geared both to training in a skill and to generate income to pay for the training.

I was involved in running a formal school and a Brigade program, in tandem, for 10 years. At first, formal school students responded enthusiastically to their involvement in building the school, in making its furniture and equipment, in producing food and cooking it. Much money was saved and three schools were developed on these lines, together with accompanying Brigades training in building, farming and textiles. The income generated by Brigade production steadily increased and reasonable standards of training were being achieved.

After some years, formal school students began resisting the work schedules on the grounds that it took time from preparation for examinations. They demanded we provide better facilities. Their disgruntlement spread to the Brigades. In the Brigades we could contain the discontent. We were able to convince the trainees that without the income generated by their work, the program would close down. Subsidies were simply not available. In the schools, however, students were supported by parents, who recognized the importance of success in examinations as the key to lucrative employment and failure as likely condemnation to unemployment. The Ministry of Education wanted better results in public examinations. Recognizing the strong vested interests in formal schooling, I abandoned the program to the Government in 1972.

Present Function of Formal Schooling

What I and some colleagues had realized was that the main function of formal schooling was role selection. This determined its highly theoretical, highly verbalized pedagogy, geared to examinations. *The function of schools was not only selection, but also exclusion.*[1] It was not designed as an effective learning system for the young, *en masse*; indeed, its purposes included the exclusion of the majority. It is a costly system and the pressures from within are to improve and refine it, using an ever-increasing share of resources to the neglect of a majority growing in absolute numbers. As a system it relates poorly to the production system of society and to employment; it turns out more people than the jobs available. Its concentration of early learning, geared to certification, produces attitudes that a completed course is the end of learning. We also discovered that schools, in isolation, cannot change attitudes shaped by the society at large.

Next came the recognition that the ills of schooling were only a reflection of the ills of society itself. Most Third World Countries have enclave economies which are an extension of the industrialized world imposed on predominantly rural and traditional societies. There are inner divisions in rural societies, layers of disadvantage, but as a whole, they relate only marginally to the enclaves. As in formal schools, the inner dynamics of the enclave are to appropriate an ever-increasing share of resources, leading to rural neglect and marginalism. A good example is the way in which schools siphon off the best talents from rural areas. It is not modernization, per se, that is wrong, but the neglect of the traditional and the appropriation of the fruits of modernization by the enclave. It is a great magnet, attracting more than it can absorb, shaping the aspirations, attitudes and hopes of almost everyone, also creating disgruntlement with the lesser opportunities of rural life.

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[1] Italics supplied.

My experience, my reading, and contact with others, led me personally to recognize education as a total social process by which the individual consciousness, outlook, attitudes (and skills) are shaped. By consciousness I mean how we think and feel in relation to what we do, and what to do. Schools generally confirm the impact on individual consciousness of the total social process. No single element of the process is really effective in changing socially shaped attitudes, whether school or other, isolated, non-formal activities. At best, the schools can impart specialized knowledge, though their pedagogy makes them suspect in achieving this.

The problem is that the poor as an entity are trapped in their poverty. They can only escape individually. The development of the rural poor is not easy in a society dominated by the enclave and its ethos. The poor need an ideology and a social order that can give them faith in their own potential to develop *en masse*, through their own mobilization.

Collectively, we know a great deal about the technical measures to solve the problem of poverty. The political will is lacking. We have great catalogues of technical measures in our different disciplines and even in multi-faceted approaches. They are mostly dispersed and fragmented.

This could sound like a note of despair. It is not. The need is to identify innovations that are politically tolerable but which have a potential for social transformation. They should contain the seeds of replicability, recognizing that replicability depends on both external factors—the nature and aims of the society—and internal characteristics.

An alternative development is technically feasible. It is possible to mobilize people to the satisfaction of basic needs. It does require political will, but it also requires the development of its own appropriate models, systems, approaches and organizations. Problems and constraints have to be identified along with practical solutions. The conventional, transferred, mimetic, systems are by and large not appropriate. More of the same can never provide enough.

One Alternative—The Brigades

In this context, increasingly I see the combination of education and production as the seed of one such alternative. The Brigades are one variant of the principle of combining education and production. They now exist at 12 different centers in Botswana. In Serowe, where my own program is located, the Brigades provide training at various levels in some twenty different skills, and they do it in a very distrinctive manner. Brigades are at one and the same time both production enterprizes and centers of skill training and of education. These twin functions are of equal importance, and each is programmed to serve the other. Skill training is provided on the job and the Brigade Managers and work supervisors are also instructors and teachers. The production program is geared to skill training, but it is also aimed at the maximum recovery of all the costs of the training and education. The bulk of the training takes place on the factory floor, on the building site, on the farm, in the printshop, and trainees are released for some of the time for theory of their trades and non-vocational lessons. The Brigade trainee is also a worker whose production pays for his training; it is in learning to produce, to be productive, that he also acquires his skill. As his skill and knowledge increase so does he also become more productive.

Total cost recovery was not a matter or principle as much as a necessity for survival in the early days. The reasonable aim should be maximum cost recovery consistent with good training. Brigades began as a response to an essentially economic problem. Thousands of young people are turned out of primary schools without further opportunities of work, education or training. The creation of new resources through production used as a vehicle of training, created new opportunities. This was an important internal characteristic of replicability. If it could be followed through throughout the education system, then the potential for universal education would be established, overcoming the resource constraint underlying present inadequate facilities.

The Brigade system has shown that training of a good standard can be achieved. We have had a good record of passes in official trade tests in those skills areas where tests are offered. Surpluses have been achieved and reinvested. We are now able to pay allowances from surpluses, opening up the system to poor youth whose labor might be required by the family.

If the initial rationale of Brigades was primarily economic, I am now convinced that the combination of education and production offers a better and more relevant system of education—as a tool of all-round development—in such a situation, if not elsewhere, than the formal school.

Education a Social Process

The popular view of school is that it is the best, if not the only place, in which one can be educated. This view fails to recognize that education is always a social process. Learning does not take place only in schools, and as a result of their directed pedagogy. It takes place also in the environment, the human and physical environment, in a directed way but also unconsciously, all the time.

Schools, in the form in which they have been transplanted into countries like Botswana, are the evolutionary product of a historical process of general development in industrialized countries. There, it is hard to disentangle how much is learned in the school and how much in the environment. The environment, with its scientific-technical culture, is probably as much the teacher as is to be found within the school. At least, in respect to science and technology, what the school has to teach, finds endorsement from the environment.

It is not quite the same in the rural environment—nor perhaps in the urban slums of a Third World Country like Botswana. There is a discontinuity, even a dichotomy, between the messages of school and of the non-industrialized environment and culture, more especially at the scientific-technical level. The non-industrial culture is predominantly traditional, but not quite wholly so, because culture is constantly changing in a changing society, and it represents the realities of the lives of the people at a given moment; everywhere there has been some synthesis of the old and the new, though in many respects the full impact of the new has still to be felt. Certainly, the predominantly traditional culture and environment in much of rural Africa, and perhaps elsewhere, impart a particular character to the human learning process and to the way people think, perceive and abstract, to their outlook and attitudes, even to their motor actions and manual skills; a character appropriate to survival in the traditional environment; but a character quite different from that imparted by a scientific-technical culture, and quite different from that imparted by schools.

The capacity of schools to educate effectively is greatly affected and somewhat diminished by the role selection function which hierarchically ordered societies impose on them.

Development everywhere requires the manipulation of a scientific-technical culture and therefore a different outlook from that imparted by the predominantly traditional environment. The combination of production with training and education, at least provides the elements, even though on a small scale, of a new environment and begins a process of manipulation of a scientific-technical culture, from and through which a more meaningful learning process can begin. It is not just theory taught without practical reflection in the environment.

In this conception, education becomes both a part of the process of changing the social and physical environment and the result of continuing development and change of the environment.

A more meaningful learning process requires a break with the highly abstract and theoretical character of schools and with their almost total preoccupation with verbalization. The non-vocational subjects taught in Brigades are Mathematics, Science, Development Studies, English and Cultural Studies, and as far as possible, the teaching of each is being given as practical a basis as possible, linked closely to the production experience and the lives of the trainees, and integrated in inter-disciplinary teaching from time to time, to promote learning effectiveness. It is believed that the rewards and gratifications of learning will be real and immediate in this process, not deferred as in school. This is learning by doing.

Elements of Science and Mathematics are applied and used within the production process of every Brigade and this provides the starting point for teaching and arousing interest in these subjects. But Development Studies, too, concerned as it is with the processes, implications, choices and history of development, finds plenty of opportunities for practical applications; the origins, development and the use of the raw materials and tools that the trainees actually utilize, the sources of capital that bought them, provide starting points for considering this subject practically. Both Development Studies and Cultural Studies are concerned with the social and physical environment and with the changes they are undergoing, and again, this provides a real and meaningful starting point for tackling the subjects.

Brigades now operate at three levels–junior, middle and advanced. These levels cover from 6 to 8 years of training and offer a considerable total in time given to academic education. This creates the possibility of imparting considerable specialized knowledge, especially in Science and Mathematics. Junior Brigades cater to the 13 to 16 age group and the middle level for those 16 and upwards. Short courses are geared to serve older people and those with little or no formal education.

Training for Employment

Brigades are conceived as training for employment. There is training for those for whom work is available, and we have established production units for those farmers, textile workers, printers, tanners and potters, for whom no employment is available in the economy.

What is important in rural areas is to create opportunities of gainful employment and to train for them. Our approach is flexible. A Brigade can switch from training to being a permanent work place. The trainers can move to another Brigade Center in another rural area. Diversification is the means by which we introduce new training and work opportunities.

At my own center we plan continual diversification by widening the range of skills and production. We are also offering opportunities and continuing education, not depending on the packaged concentration in the early years provided in schools. Diversification creates the possibility of shorter economic cycles with better linkages between production and demand. One producer becomes another's customer, and the maximum use can be made of local raw materials, even when only small quantities are available. This is facilitated by small scale production using simple technologies. We use a variety of technologies from simple to complex, and we are using the surpluses of the more highly productive, highly mechanized Brigades, to boost incomes in the less productive, inexpensive technology oriented Brigades.

Brigades provide the second chance to those with no other. But we see the top priority in creating a viable, workable alternative and challenge to the formal system through the combination of education and production.

Brigades have gained increasing acceptance in the community as an all-around tool of social and economic development.

1. They provide education and training while drawing minimally on the scarce resources of a poor country.

2. They create resources and have added to the stock of the community's wealth.
3. They produce goods and services not otherwise available in the community, and they achieve a measure of import substitution.
4. They create employment.
5. They innovate in a variety of ways, in introducing new skills, new techniques and methods of production.
6. They seek to provide a humane, people-centered orientation to development, and to promote a sense of, and pride in, craftsmanship and job-satisfaction; they are concerned with the artistic and the cultural as well as with economics.
7. They provide an orientation to work, production and development which is often missing from more conventional forms of training.

The secondary school I founded in Serowe now has 700 students. The Serowe Brigades have 400. We intend to equal and overtake that number as part of our challenge to the formal system. I am convinced that secondary schooling will increasingly lose credibility as job opportunities decline in relation to growing school output. School will appear more and more like a lottery. With its escalating use of available resources for inner development, it constitutes exploitation and can never be an instrument of social justice.

If Brigades can go on relating well to employment, their popularity will increase. If those within the system acquire greater confidence and faith in themselves and in the system, they will challenge the formal system themselves.

Improving Social Services

The Community Trust controlling the Serowe Brigade is also involved in village and social development in Serowe and neighboring villages. The trust has midwifed several cooperatives, including a diversified employment cooperative for older people trained in short courses. Brigades are co-educational, and the Trust has set up a day-care and family center to release mothers for work, and to promote adult education. The various social services are financed basically from cooperative and Brigade surpluses. The key to improving and widening social services lies both in mobilization through voluntary work and in increasing production and creating new resources.

The Ministry of Education now has a Brigades division. The National Brigade Co-ordinating Committee, set up by Presidential Directive, channels technical and financial assistance from the Government to Brigades in need of these. The Government is establishing a Brigade Development Center, the main function of which will be to train management, teaching and instructional personnel, using its own and other facilities, including advanced courses in Serowe.

Cost-recovery helps to defray running costs and overcomes the resource constraint which is a major constraint on replicability and expansion of such a program. There are other constraints. There is a shortage of capital in poor countries, a lack of qualified manpower and insufficient employment opportunities. Our solutions lie in technological plurality, a range from simple to complex, saving capital, and in those cases where investments are higher, producing surpluses, through greater mechanization, which can be reinvested. Because we have building and mechanical Brigades, we can capitalize more cheaply by constructing our own buildings and making and maintaining our own equipment. We hope to accelerate training of management, instructional and teaching personnel in a variety of ways. We, in Serowe, have organized management courses, with a strong on-the-job training component, and the University and Government assist with short courses. Our own advanced courses are becoming a source of trained personnel. The Government is offering a course, in instructional skills. At least four Brigades managers have come up through the system, in Serowe, and are performing satisfactorily. Job-creation we are tackling through production units—in the rural areas—and diversification. These attempts to solve the problem point to the internal characteristics of replicability. The basic impediment to replication is what is happening in the social system. Our greatest difficulties arise from the dual society and its dual systems, and from the enclave economy with its escalating standards that cause disgruntlement with lesser opportunities.

Brigades are, for me, the seeds of an alternative, viable and equitable development aimed at satisfaction of the basic needs of all. My own vision of education is that it should be the permanent duty and responsibility of the whole of society towards all in it. It should be the continuous function of the whole social and physical environment, the means by which society advances itself, rather than a means of personal advancement. Certificates will disappear from such a system and education will cease to be a means of creating an elite and of alienation. Education will be a vast and cooperative effort linked to work and production. Everyone will be a worker, learner and teacher. The success of such a vision requires different social arrangements, but Brigades contain the seeds and elements of a system that can serve such a vision.

Chapter 7

Panel Discussions and a Luncheon Address

Editor's Note

In planning the program for the conference and workshop, it was readily apparent that three topics or areas of activity cut across all types of developmental programs which use nonformal educational methods. One of the areas is communication methods, the second one is training designed to improve the performance of nonformal educators, and the third is literacy education. Furthermore, it seemed that two of these topics could best be presented by panels of experienced and knowledgeable persons in these fields, and the third by an experienced expert in literacy education. The panel on communication was scheduled early in the program and was very successful in alerting or reminding the conferees of important principles and methods of improving communication with the use of inexpensive audio-visual techniques. The panel on in-service training of nonformal educators, scheduled at the end of the conference, served the highly useful purpose and function of providing conferees with the opportunity to ask critical questions and make observations which cut across all topics previously discussed. A number of the unanswered or unanswerable questions may be construed as forming a partial agenda for subsequent conferences on nonformal education and the rural poor.

The luncheon address by T. A. Koshy reviewed trends in literacy education which currently make a strong linkage between functional literacy training and developmental activities. Although at the present time many, if not most, development activities which involve the participation of the rural poor must necessarily be conducted in the handicapping framework of illiteracy, Mr. Koshy's remarks and the evidence from the case studies presented at the conference clearly reveal that developmental objectives can be achieved without literacy. This is not to argue for less work in functional literacy but for carrying on development activities in whatever state of literacy or illiteracy we find rural people—with, indeed, the long-term objective of helping these people achieve functional levels of literacy for their personal enrichment, effectiveness, emancipation and growth.

In addition to the text of the three sections of this chapter, the reader is encouraged to examine the questions raised by the participants which are summarized in pages 151 ff. The searching questions and observations support at least three major generalizations: (1) the reflective, serious and professional nature of the participation, (2) the complexity of the problems of devising and administering effective programs to meet the critical problems of the rural poor, which inevitably depend on non-formal educational methods to form a linkage between the needs of the rural poor and those who wish to help, and (3) the need for many more innovative uses of non-formal educational methods which deal with these critical issues. Perhaps a few comments on the questions and observations are in order.

Questions of "values" and "ethics" of development must persistently and sensitively be addressed—but not to a point of "semantic checkmate" of action. The basic needs of survival (adequate food, water, shelter, and relief from debilitating diseases) are reasonably straightforward in their indices and in the hopes of villagers that some more humane and effective measures may be found to help them meet these basic needs. The problems are indeed complex—so complex that they have long been ignored.

Likewise, the problem of what is reasonable and practical to expect the villagers to do for themselves and what historical and *societal* changes (such as land reform) must precede or be made concurrently—is of comparable complexity to problems of ethics and values. Common sense appears to dictate that *both* types of action must be taken somewhat simultaneously, or in close sequence. Non-formal education of villagers, policy makers, and political leaders is essential for the resolution of the issues.

Although non-formal educational methods have long been used to achieve development and other objectives, the use of the term and of efforts to make better use of the methods have been very recent, essentially as recent as the enunciation of strong policies of national and international agencies, and of the expansion of programs aided by them, to do something significant about the problems of the rural poor. It is clear that we are in the early stages of experience in dealing with these issues and problems.

Using Media Systematically in Non-Formal Education

Panelists

James L. Page, *Michigan State University, Chairman*
Catherine D. Crone, *World Education*
Jonathan F. Gunther, *Information Center on Instructional Technology, Academy for Educational Development*
Royal D. Colle, *Cornell University*
Frank Hiob, *Michigan State University*
Wilfred Veenendaal, *Michigan State University*

It is impossible to recapture the lively and sustained discussion of the above topic by the panelists and conferees, principally because the panelists *illustrated* the important points about the topic with a variety of graphic and other communication media which are difficult to reproduce on the printed page. The editor, with the concurrence of the chairman of the panel, has chosen to summarize a number of salient points about the use of media in non-formal education drawn largely from articles and other materials which were exhibited or given to the participants in a packet of materials. The articles are all focused on practical applications of audio-visual media, with materials drawn from the social and behavioral sciences and from case materials of audio-visual communication methods used in developing countries. These materials are listed at the end of the résumé.

The summary of points which follow, although not necessarily expressed in the form presented, are *compatible* with the points made by the panelists who made them vivid with appropriate graphic materials and with an "Instructional Development Model" described by the Chairman. Thus Royal D. Colle illustrated a number of significant ideas with a description of the use of cassettes with Guatemalan village women; Catherine Crone demonstrated the effective use of *locally developed materials* for family planning, health and nutritional programs in the Philippines using flipcharts, flannel boards, models and other audio-visual materials; Jonathan Gunther emphasized the need of overall coordinated effort in planning and administering audiovisual programs illustrated from case material; Frank Hiob entertained the group with a story he related from New Guinea which illustrated the problem of assuring that the communication message took account of local customs and language, and Wilfred Veenendaal described and illustrated several basic points regarding effective use of audiovisual materials and the use of indigenous singing teams in a family planning program in Pakistan.

Applications of Audiovisual Communication Media to Development Programs

Although knowledge about communication technology and processes has advanced considerably in recent years, not as much progress has been made in understanding the social customs, values, behavioral patterns, social organization, and other aspects of human behavior which are essential to the design in implementation of communication messages.

Part of the problem of designing effective audio-visual messages derives from misconceptions about the rural poor such as: (a) rural people are an undifferentiated mass who think and act alike; (b) rural people generally, and illiterate subsistence farmers in particular, do not know what they want or need; (c) economic incentives will always produce change with people in extreme proverty; and (d) if people know and believe that a change is beneficial they will always act on that belief.

Audio-visual media, however excellent in technical quality, provide no panacea for the solution of development problems which require extensive methods of communication for the solution. The media used must be part of a total strategy, including realistic and sensitive assessment of needs based on the participation of persons for whom the development messages are designed in the initial planning stages, in the implementation of the program and in the evaluation of results. Also of key importance is the design and use of effective feedback procedures to keep the messages attuned to the responses of the participants. The basis of making these assessments and operational judgments thereon are extraordinarily difficult and require thoughtful and sensitive analysis, imaginative and experimental approaches which are modified by feedback from participants in the process. An important aspect of the analysis involves an understanding of the risks involved in the adoption of a recommended change of behavior as perceived by the rural people for whom the program is designed.

Whatever media is used, better results are achieved if combined with inter-personal communications provided by development agents, local leaders, radio and other forum groups. More emphasis needs to be given to the social customs and groups rather than to approaches to individuals, because group behavior influences the behavior of individuals and reinforces the development message if accepted by the group. Furthermore, the media message needs to be focused on places where the people are.

In developing strategy for effective communication programs to foster the achievement of developmental objectives, attention also needs to be paid: (a) to the political climate which may foster or repress widespread communication with rural people or groups, and (b) to the need for flexibility in accommodating national goals to local social, cultural and economic conditions and resources and local channels of communications.

In the design of media, first consideration should be given to the needs and purposes to be served rather than the particular media to be used. Then the least expensive media should be chosen which will do the job (e.g., flipcharts, cassettes, slide projectors, etc.). The money thus saved can be used to provide other components of costs and services which will make maximum use of the media chosen.

Maximum use should be made of local and traditional communication methods such as balladeers, village theater, puppet shows, story tellers and other indigenous methods. These methods should be made a part of a multi-media approach, which has proven to be more effective than single-method approaches.

Although some differences in the use of media need to be taken into account in designing programs to increase agricultural production, foster family planning, nutrition, or other development programs, the above illustrative principles and strategies will generally apply to these different developmental objectives.

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Résumé of No. 14

Improving the Performance of Non-Formal Educators

Panelists

Manfred Thullen, *Michigan State University, Chairman*
Alberto Pradilla, *the Candeleria Project, Colombia*
Francis Byrnes, *International Agriculture Development Service*
Heliodoro Diaz-Cisneros, *the Puebla Project, Mexico*

Prepared Remarks of the Chairman

All programs designed to alleviate conditions of the rural poor have professional, paraprofessional or volunteer field workers who are the front line of change. These development field workers attempt to stimulate change in peoples' behavior, attitudes, skills, values and other components of development which impinge upon, deter or stand in the way of improving the productivity and living conditions of the rural poor. Thus, it means that development field workers are performing many teaching functions, often without being aware that what they are doing is teaching people. They are not teachers in the usual sense, that is, teachers in a formal classroom situation; but teachers who work in fields, in communities, at places of work, in homes; in short, reaching and teaching people where they live and work and play. They are thus performing nonformal education roles and can be said to be nonformal educators, though often their title and job description do not make note of these roles and functions.

There are basically two kinds of development field workers—those who have nonformal education as their primary responsibility, such as workers in literacy and numeracy, adult education and vocational-technical education programs. They are usually labeled as educators of one kind or another. Their primary role is to be teachers, to educate, using nonformal education methods and approaches. The other kind of development field workers are those who have nonformal education as a secondary responsibility; either spelled out or implied by their primary responsibilities. Their primary role is determined by the goals of the particular development program or agency or organization they are working for, such as reducing or controlling population growth, developing and providing agricultural credit, building rural infrastructure projects, providing health and sanitation facilities, and so on. Thus the primary role of these field workers is to provide a particular facility or program for the rural poor. But in order to accomplish their goals, all have a secondary role, namely to help rural people change, in order that they may accept and help implement the specific projects and programs; play a role in determining specific ways of implementing the projects; adopt new practices and technology that will improve their conditions; and institutionalize programs or projects within their communities. In order to accomplish these tasks, these field workers have to be able to communicate with people and be their teachers, using non-formal education approaches and methods.

The success of development efforts thus depends to a large degree on the performance of the *field workers* as *non-formal educators*. There are, in addition, managers, supervisors, and administrators at one or more hierarchical levels above field workers, who have responsibility for instructing, motivating and supervising paid or volunteer field workers, and who may also have direct relationships with rural people. These persons invariably use non-formal educational methods in their work and, like their colleagues at lower organizational levels, are non-formal educators whether they are consciously aware of this designation or not.

Although all non-formal educators, as defined above, have some common need for in-service training, the chairman focused his subsequent remarks on building non-formal educator skills in *development field workers*. Managers and supervisors who plan such in-service training programs should take into account the following two areas: (1) administrative and organizational topics or considerations and (2) subject matter or content topics or considerations. Under the former, the following types of questions need to be asked: (1) How will NFE in-service educational programs be administered? (2) Who will conduct the training—outside experts, resident staff and related questions? (3) How can NFE methods be integrated with technical subject-matter training? (4) What formats should NFE in-service training programs follow—classroom and field, intensive programs, or continuous?

Of greater direct relevance to the needs of field workers are NFE subject matter areas which require high levels of skill for effective performances and which would need to be recognized in varying degrees in training programs for all field workers. Emphasis is given to the *common denominator* non-formal educational skills required of all development field workers in agriculture, nutrition, family planning or others. (Training to achieve appropriate levels of technical competence is equally important, but was not included in the panel's discussion).

Accordingly, some of the illustrative topics/areas which need to be included in training programs follow:

1. Attitudes, knowledge and skills for effectively working with rural people and within rural communities: how to gain acceptance as a change agent; knowledge of relevant local custom, beliefs and attitudes; knowledge about social organizations within target communities.

2. Knowledge and skills related to NFE needs assessment: techniques for analyzing problems, needs and opportunities.

3. Knowledge and skills related to planning NFE education efforts: how to develop long and short-range programs and strategies for teaching people the relevant subject matter/skills; how to develop specific "teaching plans"; how to choose the best teaching methods for reaching target audiences.

4. Knowledge and skills related to teaching in non-formal settings: appropriate non-formal teaching techniques for different situations; how to communicate effectively, using a variety of media, in different situations.

5. Knowledge and skills related to assessing program effectiveness.

6. Knowledge and skills in applied social sciences (e.g., community development, sociology, anthropology), how to: identify, recruit, use and reward local leaders and volunteers; involve people in planning, executing and evaluating programs; develop leadership qualities and capabilities in local people; work with groups; organize and maintain appropriate and effective groups and organizations; work cooperatively with other agencies and organizations; foster and facilitate local group decision-making and action.

Subsequent Discussions

The discussion which followed the opening remarks focused on questions directly related to the topic of the panel. Members of the panel responded to questions and comments raised by the participants. It was interesting to see that often one or more participants responded directly to a question raised by another participant, thus communication was not solely between the panel and participants.

Following a break, the discussion took a different direction. The participants had been asked to write down the "one most urgent question or comment" that they still had about the conference (all or parts of it) on a 3 x 5 card. These questions were roughly catalogued and then used to stimulate discussion among the participants. In this connection it may be relevant to note that this was the last session of the conference and as such provided a good opportunity to raise questions and make observations which were accumulating throughout the conference.

Some of the illustrative written questions (slightly paraphrased in some instances) which were raised, often in an animated form, follow:

1. Should the training of NF educators generally be "formal" or "non-formal"? If we use formal techniques to train NFE workers, don't we support conditions and maintain attitudes which inhibit effective learning by adults in rural areas?

2. What are the most useful generalizations about NFE for helping the rural poor?

3. What *theoretical* considerations should be included in a training program for NFE workers, e.g., principles of social change, learning theory, etc.?

4. The most important single theme which has not been discussed but which is present in all our discussions is the ethics of development. What type of development is being recommended and for what groups of people?

5. My concern is how this conference has dealt with the problem of *poverty*. There seems to be a common faith among the participants that education and training are especially effective ways to bring people out of poverty. Are they? I think there is a choice between blaming poverty on the personal inadequacies of the poor themselves and blaming the poverty condition on inadequacies of their societies. The implicit assumption here seems to be that the poor are inadequate (in terms of skills, etc.) and, therefore, they should be trained.

However, I think we have bypassed discussion of causes of poverty due to social inadequacies that are historical and political. If this second scenario is realistic, then perhaps much of formal as well as nonformal education may be meaningless in poverty alleviation, and what is needed is a strong political reorientation of these people.

Don't you think we should backtrack and examine our *assumptions* more closely before examining our methodologies?

6. Similarly, can education by itself (without undertaking land reform and change of structures) really help the rural poor?

7. The relatively low emphasis given to women (who make up the bulk of the uneducated, the illiterate, the overloaded and in poor health) and to increasing their participation in activities designed to improve agriculture, health, nutrition, etc., was also faulted.

8. The dangers of formalizing non-formal education were pointed out. In the same context, the question "What is the role and what are the limits of formal education?" was raised.

9. Can we as professional educators accept the fact that there is life beyond academia, that learning occurs without the interference of instructors, curricula or pedagogical direction? Can we admit that this "mystery" (something beyond our ken) of learning from life and its experiences is a phenomenon?"

10. Which seems more important in the definition of NFE—the methods used which are different than those in formal education, or the view of NFE as filling a gap, performing a function, satisfying a need not fulfilled by existing formal programs? It seems as though a clearer definition would help out the directions to be taken?

11. How can an innovative NFE program be proposed to a conservative government?

12. How can a development agency that has participated in numerous projects and spent millions in research and evaluation really sit back and wait to be asked for their advice and expertise regarding rural development?

13. For purposes of pre-planning and project evaluating, are there any commonly used techniques for estimating and quantifying the benefits of NFE? What are the most widely employed methodologies?

14. What is the best formula for securing positive cooperation between the central government and local communities to succeed in NFE?

15. How would you proceed to organize integrated programs (agriculture, health, etc.) instead of isolated programs? This means that it is necessary to bring together the resources available in each area coming from different institutions–but how?

No. 15

Luncheon Address on Literacy Education in Development

by T. A. Koshy

Council for Social Development, New Delhi, India

I

One of the important new developments in literacy is the acceptance of the idea "literacy for development" instead of literacy for the sake of literacy.

For any discussion on "literacy for development," it is necessary that there is a common understanding of the terms literacy and development. Although literacy is the skill of reading, writing and arithmetic calculations, it is defined in various ways by different people–in India, according to the Census Bureau, a person is literate if he has attended five years of primary school, or if he can read with comprehension the printed short sentences on a card which the enumerator gives him. Usually the census enumerator carries with him four or five cards on which different short passages of about 150 words are printed in the language of the state or region.

In 1957, a committee of experts on standardization of educational statistics suggested the following formulation: "A person is literate who can with understanding both read and write a short simple statement on his everyday life."[1] We may note that in this definition there are two relative and highly disputable terms–'understanding' and 'simple'–the one relevant to the reader, and the other to the message.

Five years later, in 1962, the UNESCO committee of experts on literacy, stated that an individual is literate when he has acquired the essential knowledge and skills which enable him to engage in all those activities in which literacy is required for effective functioning in his group and community, and whose attainments in reading, writing and arithmetic make it possible for him to continue to use these skills.[2] This definition goes far beyond the traditional notion of literacy and contains already some elements of what has become known as "functional literacy," a term which has been accepted at the Tehran Conference in 1965. A third definition denotes literacy "as the degree to which an individual possesses mastery over symbols to their written messages to write and to read.[3] After the Tehran Conference, the term 'functional literacy' came to be widely used. According to UNESCO, functional literacy in its simplest terms, should be taken to mean any literacy operation conceived as a component of economic and social development projects.[4]

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[1] Quoted in: *United Nations Economic and Social Council, 1963,* World Campaign for Universal Literacy, New York: Document E/3771.

Coming to the term "development," since the late fifties, it has been our recognized and cherished notion that development is more than just an increase in measurable levels of economic and social well-being. Apart from the quantitative growth it means also qualitative changes. It should no longer, said the report of the United Nations Secretary General on the Development Decade, be necessary to speak of economic and social development, since development--as distinct from growth—should automatically include both. Development is growth plus change; change in both is social and cultural as well as economic, qualitative as well as quantitative.[5] The social perspective of development was admirably set out by the late Jawaharlal Nehru thus: In the last analysis, economic development is but a means to an end—the building up, through effort and sacrifice widely shared, of a society, without caste, class or privilege, which offers to every section of the community and to all parts of the country the fullest opportunity to grow and to contribute to the national well being.[6]

New developments in literacy in India are based on these considerations. The earliest efforts in adult literacy in India were made in the 1920s, more as a social service program than a development program. These programs were run mostly by voluntary workers under non-government auspices as mass literacy campaigns. Voluntary organizations still play an important role in India as well as in other countries, in adult literacy and adult education. Two major efforts in adult literacy began in 1953; one was by the government when the Community Development (C.D.) program was launched by the Central and State governments, which now covers the entire rural area consisting of 550,000 villages. In the C.D. program, social education, which included adult-literacy, was an important component. The principal aim of the social education program was to prepare the minds of the people for acceptance of change, for adoption of new improved practices in agriculture, health, etc. As there was very little motivation on the part of the illiterates for adult literacy, the emphasis gradually shifted from 1959 onwards to cooperatives and programs to promote people's participation in development.

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[2] *Ibid.*

[3] Everett M. Rogers in association with Lynne Soenning, *Modernization Among Peasants: The Impact of Communication*, New York: Holt, Rinehart and Winston, 1969, p. 72.

[4] *Functional Literacy: Why and How*, UNESCO, Paris, 1970.

[5] *The United Nations Development Decade: Proposals for Action*, Report of the Secretary-General, New York, 1962, p. 3.

[6] Quoted after P. D. Kulkarni, *Social Policy in India*, Bombay: Tata Institute of Social Sciences, 1965, p. 5.

The second was the establishment of Literacy House by Dr. (Mrs.) Welthy Honsinger Fisher in 1953, at Allahabad, which was moved to Lucknow in 1956. Financial and other support for the Literacy House was given by World Education, New York. Literacy House has been a pioneer in evolving new methods of literacy, especially for making literacy functional to the learner, in preparation of teaching and learning materials, in follow-up books and in reviving and improving traditional methods of communication. At present Literacy House has a department of training, department of field work, department of publications, audio-visual section, a Family Life Education Center and a program for education of farmers who keep cattle, and other such related programs. It is now recognized in the country as an institution of national importance. A few weeks ago the Central Government, Ministry of Education and Social Welfare, designated Literacy House as a Resource and Guidance Center for Non-Formal Education for the state of Uttar Pradesh, which has the largest population—about 98 million.

The literacy program in India entered a new phase when India joined the World Experimental Literacy Program, sponsored by UNESCO and UNDP, by introducing functional literacy through a national program known as "Farmers' Training and Functional Literacy" which is currently in operation in 107 districts out of a total of 325 districts in the country.

The Farmers' Functional Literacy Program is based on the following assumptions:

1. Literacy is not an end in itself, but has meaning only as a component of a larger scheme, composed of physical as well as educational inputs;
2. A program of functional literacy has to help the farmer in his life and work, individual behavior and community action, and in understanding and using complex technologies;
3. Adults involved in improved farming practices would be interested in literacy, if it came to them as a part of the knowledge necessary for their agricultural betterment and income; and,
4. Functional literacy curriculum is a composite one, including reading, writing, numeracy, socio-economic knowledge, agricultural know-how, and practical experience.

Thus, functional literacy is much more than literacy; it is in reality a method of training for development purposes, a comprehensive non-formal education program, and an opening to continuing education. Functional literacy is, therefore, conceived in the context of social and economic priorities, planned and implemented as an integral part of a development program or project. Its ultimate goal is to assist in achieving specific socio-economic objectives by making adults receptive to change and innovation, and by helping them to acquire new vocational skills, knowledge and attitudes which they can use effectively.[7]

Based on the same concept, an experimental non-formal education project with a functional literacy component, was undertaken by the Council for Social Development with financial and other support of UNICEF and the government of India, Department of Social Welfare, as well as the state government of Andhra Pradesh.

The main objective of the project was to evolve, through experimentation, a comprehensive program which would help to decrease infant mortality and morbidity, improve the physical health and nutritional status of young children, increase the ability of rural women to acquire more useful knowledge both immediately and in the long run, and to foster their family's health and well-being, particularly of their children. In order to devise such a comprehensive program, the project undertook the following activities:

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[7] *Farmer's Functional Literacy Programme*, Folder No. 1, Directorate of Adult Education, Government of India, New Delhi.

1. To develop, evaluate and improve teaching and reading materials with maternal and child health content for functional literacy and non-formal education in Mother Child centers;
2. To test the immediate and long-term effects of integrated demonstrations in Mother Child centers in selected villages on criterion measures and supplementary measures;
3. To test the immediate and long-term effects of functional literacy on criterion measures and supplementary measures in selected villages;
4. To test the immediate and long-term effects of integrated Mother Child centers combined with functional literacy on criterion measures and supplementary measures in selected villages;
5. To identify the characteristics of the target group to whom the program is most likely to appeal and for whom the program is likely to be most effective, moderately effective and least effective;
6. To study the process of attrition in both programs and to determine motivational incentives and activities most likely to maintain a high level of attendance, and
7. To determine the organizational structure and costs necessary to conduct the separate and joint programs and to recommend the most economic structure for the wider dissemination of the program.

In January, 1975, World Education organized a multinational workshop on functional adult education in which representatives of seven projects from within the U.S.A. and seven from outside the U.S.A. were invited to participate. The non-formal education projects of the Council for Social Development was one of the seven from outside the U.S.A. In connection with the presentation on this project in that Workshop, World Education prepared a slide-tape show which I am happy to present to this audience.

The project was concluded in October, 1975, and I would like to present the major findings of the three experimental treatments.

Effectiveness of Treatments

Our hypothesis was that the combined treatment of functional literacy and Mother Child Care Center would have the greatest impact, followed by Mother Child Care Center and then functional literacy. The following are our findings:

1. The data indicate that on every measure of health, nutrition, and family planning education, the Mother Child Care treatment showed the largest gains, which were significantly greater than those of control villages;
2. The combined treatment, Mother Child Care plus functional literacy, showed the next highest level of change, but in general, was consistently lower than the Mother Child Care treatment. The differences in this case also were significantly greater than the difference in the control villages;
3. The changes in the functional literacy villages were, in general, more modest in the area of health and nutrition and not significantly different from control villages. Only in the area of family planning were the differences significantly greater than in control villages;
4. In the literacy measures only, the functional literacy treatment *per se* seemed to make significant changes in reading, writing and arithmetic.

Follow-up of the Project

UNICEF, India, has sponsored a seminar to be organized by the Council for Social Development which will be held at Hyderabad at the end of October, 1976, in which the findings of this study and their implications for the Integrated Child Development Services (ICDS) scheme of the Central Government will be discussed.

Chapter 8

No. 16

Workshop on Non-Formal Education and the Rural Poor

by Kenneth L. Neff

The Workshop that followed the Conference on Non-formal Education and the Rural Poor was scheduled to enable selected foreign participants to interact to the rather substantial presentation format of the conference. The expectation was that such an opportunity would enable the participants to draw upon their collective experience to analyze both the abstract principles and the concrete experiences that comprised the conference presentation program, in order to derive operational principles and identify certain of their "felt needs." It was also felt that such an assessment might constitute the basis for an agenda of "next steps" in the further exploration of the "distributive development" role of non-formal education.

As the Conference was drawing to a close at mid-week, selected foreign participants and AID staff entered the workshop phase of the program. During the first day and one-half, there were two major workshop groups: the AID Caucus Group consisting of AID staff members from both Washington, D.C., and overseas missions and the group of largely AID-sponsored foreign participants who constituted the NFE Workshop.

The AID Caucus was organized and conducted by AID representatives. The opportunity for AID professionals to meet as a group was planned as an important workshop activity, but the content and focus of their deliberations were left to them to organize. After the Caucus, most of the AID personnel from overseas missions joined the workgroups that had been organized by the workshop participants in the meantime.

While the AID Caucus was in session, the NFE Workshop participants met and organized themselves into four workgroups. Each of the groups that emerged had its own personality, focus, interests, and objectives. To the extent that the workgroup reports reflect the characteristics of each group, the following generalizations and comparisons seem reasonable.

Most of the groups were more process-oriented than goal-oriented. The basic Education and Literacy Workgroup seemed markedly goal-oriented, largely because of their emphasis on basic education and literacy being delivery objectives of non-formal education. The Research and Evaluation Workgroup treated both NFE goals and NFE processes in terms of describing research needs, but within the research field itself, the group did not delve very deeply into the adequacy of present research tools and concepts for dealing with such problem areas as participative research and planning in a semi-literate village population. They generally seemed to assume that properly applied, currently available research technology can produce the desired results. The other two groups were strongly process-oriented in their approach, stressing participation, coordination and collaboration in particular.

Each of the groups dealt with a specific interaction point, or interface, in non-formal education: The Latin American Group focused on the interface between parallel and complementary program elements: coordination and collaboration. The Basic Education and Literacy Group was most concerned with the interface between formal and non-formal education. The Community Action Group zeroed in on the critically important interface between program structures and target communities. The interface between knowledge generation and action programs was the target of the Research and Evaluation Group as they generated their "needed to know" agenda.

Though the groups tended to focus on different aspects often from differing perspectives, there were several important threads that can be traced through the overall design in all their reports: the critical importance of participative style, of coordination and collaboration, and of environmental factors and their impact upon needs and resource assessment were all noted in each of the reports. All the reports also made at least some reference to methods, media and materials and to various "external support" considerations.

LATIN AMERICAN WORKGROUP

The Latin American Workgroup came into being in response to a felt need on the part of many workshop participants to work in their own Spanish language. There were fourteen participants from eight countries and one international agency was represented.

The focus of this group was on an overview of development problems, especially in subsistence agriculture. Although their report discussed both methods and objectives, the group seemed to be more process oriented than goal oriented. Their priority area of concern, as it emerges in their report, is the interface between parallel and complementary program elements in related development sectors—coordination.

Summary of Report: Jerry O'Sullivan, Reporter

Many of the general principles and recommendations of this group grew out of discussions of nutrition problems in Latin American countries. This workgroup considered the undernourishment suffered by millions to be one of the most critical problems to be solved among the rural poor. Needs for better seed varieties, improved agricultural technology, and increased knowledge of nutritional factors were cited.

The inadequacies of educational opportunity were also noted and the group drew attention to the need for structural change. Poverty is a class problem in society and non-formal education cannot effectively change this reality unless there is also structural change. The absolute level of poverty evident in many areas today suggests that profound changes are needed in society, in income distribution, ownership of property, etc., if we are to change the level of poverty of a significant sector of society.

Coordination

Coordinating non-formal education projects is a top priority of many governments in Latin America not only because there are so many projects oftentimes competing for the same public, but also because it is essential to give structure and direction to non-formal education at a national level. All too often the coordination is undertaken to serve the needs of national governments, international agencies, etc., and is seldom undertaken to fortify effectively the community base activities.

When governments speak of coordination, they are generally referring to the creation of an interministerial commission which will give order and direction to the educational efforts of their ministries. However, it is not necessarily a question of replacing programs or of creating new programs, it is a question of basically coordinating existing programs, of providing common production and distribution facilities and of organizing communities at a village level. It is at this level that the real benefits of coordination will be evident. Oftentimes agencies compete with one another in promoting change in the rural areas. Appropriate coordination with other non-formal education projects and agencies at the local level is a critical need.

Goodwill is a necessary, but not sufficient, condition for achieving coordination between and among institutions. Coordination, to be effective, must be a two-way process; at the village level it means giving order and direction to the many initiatives that are proposed and undertaken. At both regional and national levels, it means achieving the best possible use of the services and facilities available. Coordination must have as its basic objective the delivery of better and more effective services to the target population of the non-formal education program. Close coordination with the formal education system should be established so that classrooms and other facilities can be shared.

Coordination also requires new approaches from other institutions that are involved with government agencies in planning non-formal education strategies. Specifically, the international aid organizations such as World Bank, AID, UNESCO, UNICEF, etc., must seriously consider organizing their respective agencies to respond on an intersectoral basis, not only in their respective agencies but also among one another and in their relationships with government agencies or ministries. The survival of a project after the foreign agency finalizes its commitment can be assured only if it has been integrated effectively into national programs. This group feels that all projects with international economic support should be extensively discussed both at a national and local level where possible, in order to achieve effective integration and community support from the very beginning.

The participation of the local community both in the planning and the development of the project is essential. In too many cases both foreign and national agencies come to the rural areas with programs that already have specified objectives. The role of the community in such cases is a passive one; little planning research is actually completed and a process of motivation is scarcely initiated. Thus, the programs are not fully assimilated into the local community and are often viewed with fear and little confidence. Several workshop participants expressed the fear that increasing bureaucracy and administration will reduce the effective role of local initiative and participation.

It is absolutely necessary to reaffirm that local communities have the necessary intelligence and skills to undertake many of the activities that are often left in the hands of outside agents. They expressed the belief that programs will be more successful if a good balance of local participation, appropriate technology and an active consciousness of self-help can be achieved.

Needs Assessment and Participation

Community development programs must take into consideration the real needs of communities. Organizers must assume a common responsibility with the community not only in identifying the problems, but also in identifying themselves with these problems. The risk of vulnerability is a shared experience. A promoter must have a sense of empathy with the community and its needs and be able to promote responsible local organization, so the community can participate actively in the planning of new programs based on the actual needs of each community.

Resource Assessment

Oftentimes, local resources which exist in each community are not known. Too much effort is concentrated on establishing needs assessment, delivery systems, communications media, and too little study is being dedicated to the discovery and utilization of local resources, e.g., people with natural talents and abilities, local initiative for self-help, etc. Most subsistence farmers are more efficient than they are popularly believed to be. NFE operatives should be aware of and utilize the subsistence farmer's intimate knowledge of local ecological factors.

Non-formal education must effectively mobilize local resources, abilities and leadership. More use must be made of local technology. Projects should be labor intensive rather than capital intensive and should make every effort to use appropriate local technology and manpower in the best possible combination.

Media and Materials

The report made passing reference to the wide use of radio as a medium and noted that printed visual materials such as posters and comic strips have also been employed successfully. They cautioned, however, that since the majority of the rural poor is either illiterate or semi-literate, materials used should be simple, accessible, and not require advanced skills like reading ability.

BASIC EDUCATION AND LITERACY WORKGROUP

This workgroup had twelve members from ten countries with one regional organization represented. The group report suggests a strong "professional formal educationist" orientation as it examines the interface between formal and non-formal education. Compared to the other workgroups, this group seems more goal-oriented than process-oriented. The workgroup report covers a rather extensive listing of topics, but most of the recommendations are concerned more with what should be done than with non-formal education processes and approaches for doing it. Much of the report is devoted to defining basic education and functional literacy as objectives of educational programs both formal and non-formal.

Summary of Report: T. A. Koshy, Reporter

This workgroup suggests that limited educational opportunity is the chief need that formal and non-formal education should respond to. Low primary school participation rates (c. 50 percent) plus poor retention rates mean that almost 50 percent of all children of school age do not get the basic minimum education that would enable them to grow up with a modicum of self-reliance and social responsibility. Non-formal education for the rural poor is a part of the effort in equalizing opportunities for education in the rural areas, in addition to being development oriented. The result of equalizing educational opportunities will be social justice and strengthening of democracy at the grass roots level. The group highlighted the need for special effort for the education of women in the rural areas and noted what significant role women's organizations are playing in this field in some countries, including Thailand, Nepal, India and Afghanistan.

Basic Education

Basic education can be described as craft-centered education which is aimed at imparting various skills along with general education. It is not a second-rate or a next-best education with the disadvantaged as the clientele. It is for all the people who must learn a common body of knowledge, skills and attitudes, consonant with their cultural values, aspirations and development goals. In the Philippines, basic education is conceived as the minimum level of education with identified essential components that all citizens in any given society must be equipped with in order for each one to realize his own potentials as a human being and be able to participate effectively in the functions of the society to which he belongs.

The group drew upon Coombs' minimum learning package (Coombs, *New Paths to Learning*) in order to describe the components of basic education: positive attitudes . . . functional literacy and numeracy . . . a scientific outlook and an elementary understanding of the process of nature . . . functional knowledge and skills for raising a family and operating a household . . . functional knowledge and skills for earning a living . . . and . . . functional knowledge and skills for civic participation.

Literacy

Literacy should be a part of basic education, especially in respect to the younger age groups who either had no opportunity to attend school or who have dropped out of school with insufficient literacy skills.

Target Group

The target group is the rural poor as a whole, but for the purpose of developing basic (non-formal) education it may be identified as: out-of-school children (aged 6-14), youth (aged 15-25) who have completed a stage of school education and are not in college or in any kind of educational or training program, school dropouts, and adults both illiterate and literate. In view of the importance of education for rural women, they may be considered as a special target group.

Communications

Extensive use should be made of communications media to develop in the learners the essential components of the minimum learning package. This requires the development of appropriate software, particularly the retraining of teachers and the acquisition of needed hardware. The group agreed that indigenous channels of communication should be used in non-formal education to the extent possible.

Content

The term "curriculum" should not be used for the content of a non-formal education program; however, the goals to be achieved, knowledge to be transmitted, and skills to be gained by the learners should be clearly indicated for the benefit of the teachers as well as the prospective learners.

Technology

Make use of innovative delivery systems like IMPACT (Instructional Management by Parents, Adults, Community and Teachers), ISOS (In School–Out of School), and RIT (Reduced Instructional Time) all of which are under experimentation in the Philippines.

Coordination

It is necessary to have an organization to coordinate the non-formal education activities in a country. Non-formal adult education, including adult literacy of a functional nature, should be linked to various rural development projects or schemes operating in the area–coordinated programs with other agencies–agricultural, technical, industrial, health, nutrition, population, and cultural activities. Non-formal education also calls for decentralization of power or actual giving power to the people to make decisions for their own betterment.

The infrastructure necessary for organizing non-formal education for the rural poor is already there and existing facilities of formal education, such as school buildings and equipment should be fully utilized for non-formal education also. Entry points in the system should be flexible to provide opportunities for all, both in formal and non-formal situations, the latter reinforcing and enriching the former, the first providing a foundation for the second.

External Assistance

Before requesting foreign assistance the country itself should make its commitment in terms of funds and willingness to undertake the program.

Research Needs

The impact of using students in teaching literacy and basic or non-formal education needs to be studied, both from the learner's point of view and from the student's point of view.

A comparative study of different kinds of non-formal education teachers should be undertaken so as to give some valuable advice to the countries participating in the Workshop.

COMMUNITY ACTION WORKGROUP

There were sixteen participants from twelve countries in the Community Action Workgroup. One international and one regional organization were also represented. The group employed a very process-oriented approach to an examination of the interface between program structures and participating communities—to interaction at the community level.

Summary of Report: Gilberto Mendez, Reporter

Consensus was reached that community action is a process—a problem-solving process that usually involves three general categories of action that Paolo Freire identifies as levels of consciousness:

1. *Mention*—community members organizing to enable the exchange of ideas and identification of needs;
2. *Reflection*—to identify constraints and resources and set priorities; and
3. *Action*—to mobilize human, physical and financial resources toward the solution of a problem or the satisfaction of a need.

Participation

Local commitment must be secured to utilize local time, labor and materials. In developing community action programs, communities must be encouraged to establish priorities. To be successful, a community action program must provide for a flow of ideas from the local level to the regional and/or national level.

In a successful community action program, the change agent must secure the confidence and faith of the villagers. Community change appears to be achieved better through group action rather than through single change agents. In order to secure the participation of women in community action programs, some efforts should be aimed initially at freeing women from menial time-consuming tasks.

Needs Assessment

Successful programs in rural community improvement must start with the identification of needs by the villagers and local support for community action. Community needs should be identified by community members; action facilitators should emphasize the articulation of these needs and the operations necessary to meet them.

To sustain employment-related training of unskilled workers, industry and business should become active partners with the government in supporting the cost of such training. A program for transforming the unskilled into semi-skilled workers must correspond to employment, self-employment or labor-intensive production opportunities and activities.

Resource Assessment

Most community development efforts must get villages to recognize constraints and resources. Generally, projects should be aimed at using local resources to meet local needs. Outsiders must know a community thoroughly and understand its patterns of action before changes are attempted.

Personnel

Change agents must rely on community leaders; or better yet change agents should belong to the community. Most community development efforts must motivate community mobilization toward the solution of problems. Community leaders should be induced to visit other similar communities that have achieved significant improvements with similar constraints and resources.

Most community development efforts must generate leadership from within the community, identify and train leaders, and organize communities for sustained development. Change agents can include children of school age, visitors from other villages, teachers, religious leaders, members of unions, etc. Teachers for rural areas should receive special training that will enable them to assist in promoting community action for development.

Planning, Evaluation and Programming

Time factors must be weighed carefully to allow a reasonable implementation time frame and continuity of development efforts. Continuous, extensive community development programs appear to be more effective if they are cross-sectoral in their design or approach.

Desirable changes in communities may be social as well as economic. Flexibility should be built into the community development process to allow for constant evaluation, feedback, and adjustment of implementation programs to fit unfolding realities. External support, if needed, should be coordinated, well-integrated, timely, relevant, applicable and should enhance community initiative and allow for a two-way communication flow.

Suggested Workshop Follow-Up

The exchange of ideas and the discovery of common problems and approaches toward their solutions led the group to express the need for some continuing mechanism whereby these exchanges could take place periodically on an international basis.

RESEARCH AND EVALUATION WORKGROUP

The Research and Evaluation Workgroup membership included eleven participants from eight countries. The group focused on the interface between knowledge generation and action programs—on identification of the "need to know."

A rather extensive listing of research needs was identified by the group in its report. The needs identified deal both with NFE processes and NFE goals, but from the research point of view there was more emphasis on the need to produce a desired outcome than on a discussion of "research process problems" that might complicate the attainment of the research objective.

Summary of Report: Bommathanahalli Ramakristina

There is a growing need for a theoretical framework for non-formal education. The only way to build sound NFE theory and relatively flexible praxis is through building a research component in any action-oriented NFE program. In addition to this need for having more accurate conceptual frameworks in non-formal education, there are needs for:

1. testing assumptions about NFE objectives;
2. improving the quality and extending the scope of NFE programs;
3. better understanding of educational phenomena as a whole and in different contexts in which learning takes place; and
4. determining the universality/adaptability of various NFE models for purposes of replication.

Do we really know how to assess needs and design an appropriate curriculum model? How do we go about assuring learning satisfaction or providing reinforcements that are basic in many educational activities?

Research activity, particularly the "action-oriented" type, is proposed as a fundamental element. There is need for developing methods and techniques in different learning settings.

Research Needs: Participation and Interpersonal Factors

The learning activity which takes place in a given location implies the participation of community inhabitants in order that it may evolve in the most profitable manner. The involvement of the learner from the very onset of the research task is an important component. Careful records should be maintained on the amount, type and degree of participation of client groups to check the effect of varying amounts of personal and training inputs.

Components such as institutional coordination, dynamic social change, flexible interpersonal interactions, and differing social and cultural values are some of the most difficult aspects to control when using participation research that has been suggested as a distinctive approach to NFE. Personality measurement may enter into selection of key personnel. Attitude changes resulting from interpersonal aspects of a project may be pivotal points in the success or failure of that project.

Participation of client groups in the planning and management of research may produce interest and more active response. The client group in this sense could be considered as project implementers themselves, and in the long run, innovators, which makes them your most valuable adapters.

Research Needs: Needs Assessment

Needs assessment could basically be described as activity between the learner and the educator which leads to the establishment and description of both felt and ascribed needs. One should include an element of flexibility—needs may take different directions and dimensions in the course of implementation, leading to modifications in the learner's originally expressed needs.

Priority research topics in the area of needs assessment include:

1. the use of outside survey teams;
2. the use of local census results and the use of local census takers;
3. involving local inhabitants;
4. inventories in subject matter areas to rate priorities;
5. the use of literacy tests and data;
6. the use of school records;
7. the assessment of local demand and requirements for employees;
8. the use of certain "indices of poverty" to locate priority regions of a country for NFE programs.

Research Needs: Environmental Factors

It is essential that the planning of education (formal, nonformal and informal) take into consideration the economic and cultural realities of the area, requiring the study of the area and its inhabitants in a broad sense. The essential thrust is that of utilizing local resources for the identification and perhaps conceptualization of problems in NFE. Through the utilization of local research facilities and personnel, research in NFE would become more relevant for local practitioners and policy makers.

Economic realities have much to do with the purposes and procedures of any NFE project. They also affect the kind of baseline data, the kind of instruments, and the administration of instruments and other techniques used in the research or evaluation.

In many areas where management and the conduct of training in a project are in a national language, the vernacular speaking inhabitants may be hurt. The language factor then could act as a sieve, selecting only certain cultural elements of the society. The attitudes of key officials toward languages or language groups may be an indicator of possible success or failure in certain areas.

Topics for research in the social context abound in the fields of poverty, language, literacy, skills training and health:

1. What are measurable social and economic benefits of literacy, of skill training?
2. What is the economic and social value of being able to speak the national language?
3. What is the benefit to the employer of better health?
4. What effect does NFE have on health?
5. What are the cost factors for all program factors related to economic and social gain?

Research Needs: Content and Methods

Suggested research areas emphasize needed methodologies in:

1. Comparing advantages of several curriculum construction models;
2. Involving target group participants in the curriculum design process;
3. Determining appropriate teaching methods;
4. Selecting appropriate educational technologies;
5. Identifying the most effective human resource preparation models for hard-to-reach rural populations;
6. Effectively utilizing and mobilizing human, social and commercial resources;
7. Designing learning environments.

Research Needs: Organization and Management

Priority research topics related to the administration of planning, implementation, evaluation and control of NFE should include:

1. Development of a continuous feedback system built into the NFE activity (evaluation);
2. Mechanisms for optimizing dissemination and utilization of research;
3. Staffing and leadership;
4. Integration of social/economic aspects;
5. Administrative organization.

Research Needs: Communication

Suggested significant research areas would be studies of:

1. Mass communications use,
2. Communications flows,
3. Interpersonal communication,
4. Communication and diffusion of innovation.

Coordination and Collaboration

Host country and U.S. personnel should be encouraged to jointly work out common strategies for dealing with problems of similar research interest. This emphasizes the cooperative aspect of research investigations which impacts on financial and personnel resource allocation. Institutional cooperation of the type being sought would establish linkages, launch staff exchange programs, offer short-term training opportunities, and provide some hardware facilities where appropriate.

Cooperativeness could be linked to consortiums of competence. For example, the Midwest Universities Consortium for International Activities (MUCIA) is presently linked to many universities outside of the U.S. Clearly, the added resources available under such an arrangement could be of great importance to a younger and less experienced research facility.

Important Components of Implementation

Both indigenous and exogenous educational research/resource institutions should be utilized and research should be coordinated with the activity's basic development input and with development of total program. Develop and/or strengthen indigenous research capability through training and institutional networks and professional linkages.

Utilize the leadership capabilities of facilitators and design research to reduce burdens on the respondents. Strengthen the interdisciplinary aspect of research, develop the relationship between research and evaluation, and make certain that financial resources for carrying out the research are accessible.

Communication of Research Results

Research results must be translated into understandable form for various audiences. One primary consideration should be that of coordinating the adaptation and use of the research results. The message to be conveyed should take into consideration the level of knowledge and vocabulary of the receivers involved in the final communication process. Various mechanisms were suggested in the report.

Recommendations

The workgroup outlined certain areas that warrant research efforts:

1. Basic research in education should be strengthened to include NFE topics.
2. Methodology to assess needs in a participative setting.
3. Methodology for carrying out in-country NFE case studies at an international level.
4. Methodology to collect baseline data with a view toward reducing diagnostic time in order to permit early decision-making.
5. Understanding applications of experimental designs relevant to NFE.
6. Strategies of research in an integrated approach to NFE in terms of coordination, institutionalization, and special investigations of critical subject components.
7. Development of a continuous feedback system in an ongoing NFE program to monitor or effect specific or comprehensive changes.
8. Preparing or training local human resource input to handle research in NFE settings.
9. Problems of staffing and coordinating national or international research in NFE. (It is proposed that the MSU/NFE center undertake the initiative in coordinating research activities all over the world.)
10. Developing local leadership to organize and conduct research in NFE.

In Conclusion

Generalizations and operational suggestions that emerged from the Conference have already been discussed in Chapter II. Clearly, many of the major factors identified in that chapter were further underlined by one or more of the workgroups. In particular, their discussions of participation, needs assessment, resource assessment and environmental factors stressed such factors as the "wisdom of the villager," "respect for cultural values and norms," "use of indigenous social organizations and local leaders," and the "necessity of governmental and villager support and commitment." This added emphasis should further validate the identification of these factors as being critically important to the success of non-formal education programs in rural development.

The one factor that appeared to generate differences of opinion from group to group was literacy. Whereas conference proceedings clearly underplayed the importance of literacy as an essential "first step" to learning, the Basic Education and Literacy Workgroup seemed to assign a high priority to functional literacy program efforts. Perhaps much of the apparent difference of opinion concerning the importance of literacy is due to the composition of the Basic Education and Literacy Group. Most of them were educators and many of them were persons with official responsibility for literacy programs. Historically, professional educators have not been in the vanguard in either the designing or the implementation of non-formal education programs, particularly those in the area of rural development. Educators also have exhibited a strong tendency to view "education" as an end product delivered by the schools, more than as a means for dealing with the daily problems of individual, family and community life. Understandably, they have tended to promote the professionalization of education and teaching and to downgrade educational programs that do not utilize professionally trained teachers and meet other "standards" of formal schooling. Similarly, since it is virtually impossible to succeed in the school system without the tool of literacy, very high priority is assigned to being literate. Thus, it should not be surprising that this group of educators should have expressed the concerns they did *vis-à-vis* the functional role of literacy in rural development programs.

Considered both individually and as a composite, the output of the four workgroups was qualitatively and quantitatively outstanding, particularly in view of the relatively short period of time available for small group deliberations. Such results could have been achieved only as the result of genuine interest, a great deal of dedication, and many hours of work under the candle.

Chapter 9

Résumés or Excerpts of Articles on Non-Formal Education

Editor's Note

An examination of the conference program (abbreviated in Appendix A) will quickly reveal that the schedule of sessions was very full—too much so in retrospect—in order to deal, at least in an illustrative manner, with the principal types and range of development activities which rely on nonformal educational methods to achieve their purposes. The advisory committee on the conference was aware of this problem but took a "calculated risk" that the conferees would "hang in there" if the ideas presented and discussed, principally in the case studies, were evaluated as significant.

But even a full to overflowing program was not sufficient to accommodate all the significant materials which we wanted to bring to the attention of the conferees. One "out" was to reproduce a number of highly selected articles and other materials which would supplement or reinforce the concepts which were to be developed in the selected cases. Several graduate students searched the literature for such material, which was reviewed by the conference chairman and members of the advisory group before being reproduced for compilation in a packet for each of the conferees. The hope was expressed that some of the materials would be read during the conference, but if time did not permit, which it didn't, that the reproduced article, plus the cases, would constitute a "mini" professional library on nonformal education, particularly for those participants who do not have readily available materials of this nature.

Six of the articles are reproduced in this chapter, plus a list of other reprints of articles which were distributed to participants. The latter may be construed as a partial bibliography of highly selected materials on nonformal education.

The titles and authors of other materials written by participants in the conference, and also reproduced for the conferees, follow:

MONOGRAPHS OR ARTICLES DISTRIBUTED TO PARTICIPANTS

Barrett, Hugh. "Tanzania: Planning a National Mass Adult Education Campaign." Originally presented at a conference held at Stanford University in 1976 on the Mass Adult Education Campaign in Tanzania. Detailed research reports on the program are available from the International Council for Adult Education, 252 Bloor Street W., Toronto, Canada.

Brumberg, Stephen F. "Colombia: A Mobile Skill Training Program for Rural Areas." (Promocion Profesional Popular-Rural of Sena). International Council for Educational Development (ICED), reproduced from *Education for Rural Development*, edited by Manzoor Ahmed and Philip Coombs. New York: Praeger Publishers, 1975.

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Byrnes, Francis C. "Some Missing Variables in Diffusion Research and Innovation Strategy." Agricultural Development Council, Inc., 630 Fifth Ave., New York 10020. March 1968.

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PAPERS PREPARED BY PARTICIPANTS

Alvarez, Benjamin. "Nonformal Education: The Conceptual Problem." Bogota, Colombia.

Kritayakirana, Kopr. "Nonformal Education and SEAMEO" and "Recommendation of the SEAMEO Regional Conference on Nonformal Education."

Oliveros, Claudio. "Nonformal Education in Guatemala" and "Basic Education Movement of Brazil."

Radcliffe, David. "Development Education and the Sri Lanka Sarvodaya Movement." University of Western Ontario.

Rasmarjo, Slamet. "The Experimentation Project of the Vocational Training Center." West Java, Indonesia.

Soemardi, H. S. "Development of Nonformal Education in Indonesia." Ministry of Education and Culture, Jakarta, Indonesia.

____. "The Development of Nonformal Education as the Central Institutional Thrust of Ikip-Ujung Pandang, Indonesia."

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Listening to the Peasant

by Guy Belloncle[1]

Foreign experts and their local counterparts suffer from the same superiority complex, ignoring knowledge accumulated over centuries.

The following reflections are culled from 12 years of contacts with the "black peasants," as Robert Delavignette dubbed them 40 years ago, of the Sahel-Sudan zone in Africa and the beneficiaries, so to speak, of the numerous operations, projects and agricultural development programs that cropped up in their territory after independence.

For those who get a chance to hear both sides of the story—the peasants' view of this chequered pattern as an intolerable aggression, and the lament of the intervention organisms and financial backers over the paucity of results achieved—the history of this "rural development" decade will take on the proportions of a tragic misunderstanding. We should like to clarify the facts of that misunderstanding so that the lesson learned from its long series of failures will not lead to disillusionment or scepticism—often tinged with racism: "What can you do with people like that?"—but to a ruthless revision of the strategies, methods and teaching systems applied.

For over ten years, agricultural extension, as we have seen it practised in the area, was heading in the wrong direction, it seemed to us because, from the very outset, it was based on a number of erroneous, and often implicitly normative, postulates. One of the most obstinate postulates was that the black peasant is endowed with a very low technical capacity. Basing their judgments on a verification of the evidence—the negligible mechanization of traditional agriculture—European and European-trained African technicians rashly extrapolate and conclude that "these people have everything to learn." Rare indeed are those able to look behind outward appearances and perceive what delicate balances the African peasants have managed to achieve. Thus, for the most part it is not the agronomists who have analysed the factors of these balances but rather the geographers, following the lead indicated by Jacques Richard-Nolard, whose article "A Plea for a New Peasantry in Black Africa." written more than 20 years ago, is still relevant today.

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[1] Guy Belloncle is Deputy Secretary-General of the Institut de recherche et d'application des methodes de developpement (IRAM), especially in charge of Africa. After teaching in Paris and Dakar, he has directed various development missions in Africa as expert or consultant. He has written a number of works. This article reprinted with permission of the publisher from *Ceres*, the FAO "Review on Development," Vol. 6, No. 3, May-June 1973.

Unfortunately, from such an initial postulate unfolded a chain of consequences which were to constitute a number of basic truths common to almost all the extension programs. These aimed at defining simple or comprehensive themes—fungicides, sowing in rows, densities of sowing, etc.—pertaining to modern crop growing, called "locomotives" because these modern methods were meant to lead the peasant into acquiring good habits, which he would then apply voluntarily in growing other food crops. Another inevitable corollary of this basic postulate was the assumption that the peasant's technical level was so low that he constantly had to be kept up to snuff and that the extension man was obliged to demonstrate every new technical trick to him. Here we find justification for all those "encadrements rapproches" ("close watch units") which have flourished in black Africa for ten years, generally comprised of diploma holders obliged to swallow in a matter of months the "catechism of the perfect little extension worker," in a series of tricks of the trade which they, in turn, are charged with cramming into the key peasant (paysan de base), often called "planter" in the agricultural extension societies' terminology.

The final recommendation of the catechism is to sniff out "pilot peasants." The propagator or basic instructor is expected to spot the most receptive peasants, to whom he then gives his close attention. When he visits the village, he sees the pilot peasants first, even before the village chief or the local bigwigs. Some, granted credit facilities according to their needs, are exhorted to take on equipment and plant new crops, which makes them more and more conspicuous in their communities. Ultimately this can only leave them a choice between a break with the other villagers, which might provoke dramatic consequences, or a return to standard behavior after a few wayward years. These sudden reversions to the norm by apparently well-launched peasants are inconceivable to the propagator, who tends to see them as further proof of the peasants' ill-will.

In all this, some will find only an exaggerated caricature of the extension policies applied in this African region during recent years. True, with some projects this philosophy is passing into limbo; but globally it still seems to be permeating too many development programs. And since, in our opinion, it is the essential cause for most of the failures, it is time to reject such simplism and substitute a concept of extension more respectful of the black African peasant, which could only bring about heightened efficiency.

Ten years of contacts and discussions during various periods of instruction and talk sessions have convinced us more and more that if the extension programs failed to "hook" the peasants, it was not because those programs were too complex but rather because they came up with nothing better than absurd palliatives to the problems of African agriculture. To cite an example: to the peasants of the Zinder region in the eastern part of Niger who, for years, have been grappling with the problem of diminishing fertility ("The soil is dead," they say and, as irrefutable proof, bring your armfuls of "katchemou" which, when it starts growing, indicates that the soil is nearly exhausted), agricultural extension counsels, "Use a fungicide on your seeds." What would you say of a doctor who prescribed an aspirin tablet to cure tuberculosis?

What is so astounding is that effective technical solutions actually exist, often under the peasants' very noses. To illustrate, here is an episode which marked for us a decisive step forward in our search for a new extension method of instruction:

In April 1968, we were present during a seminar for peasant-instructors held in the Magaria zone in southeast Niger. The purpose of this seminar was to prepare for the agricultural season along classical lines—fungicides, row-sowing and good density. Suddenly a peasant spoke up and said, "Three years ago a white man came to our village and asked us to give him a field. We gave him a worn-out one behind the village. He went and fenced it in. A pilot farmer came with some cattle and equipment and he farmed the field just like the white man told him to. When I go to my field, I pass near that white man's. Never in my whole life did I see such tall millet and such big maize. Even last year when there wasn't no rain, his millet was taller'n a man. Where we wouldn't have reaped ten sheaves, that white fella reaped more'n a hundred. If you want to teach us about farming in these here times, that's what you got to teach us."

The white man's field was simply an operational base set up by IRAT (Institut de recherches agronomiques tropicales) to experiment with different techniques for restoring fertility–deep-soil fertilizing with phosphates, strong manures, etc. The instructing technician, a Nigerian chief of agricultural works entrusted with supervising the zone, with its approximately 200,000 inhabitants, knew nothing of this operational base or what was being experimented there; he simply went on preaching the catechism he had been taught. Still worse, all the agronomists we told this story to manifested the same reaction: restorative fertilizers are an interesting technique, but the peasants simply aren't with it. You have to begin with elementary techniques and recite the list of "hierarchized" themes–to which the peasants invariably reply, "When the soil is too worn out, not even your cure (fungicide) does any good." This is a dialogue of the deaf which amply denotes the extent of the misunderstanding. Is there any way out? After so many protests, now is the time to propose new strategy.

There is No Vacuum

First of all, our "modern" agronomists must be persuaded–and in this respect, let's say it again, nationality doesn't figure, what with everything being poured into the same mould–that they are not working in a void. *The men they deal with are peasants in the truest sense of the word, men who, for generations, have accumulated a capital of experience which constitutes the indispensable point of departure.*[2] As we have repeatedly verified, they possess to the highest degree that knowledge of the concrete so perspicaciously described by Levy-Strauss in his "La pensee sauvage." They can accurately recognize different types of soil and plant varieties that would confound many instructors and geneticists were they required to pit their knowledge against that of some local head farmers. Most of all, they have a profound feeling for agriculture as the means to find the best balance between man and nature. They take scrupulous pains to preserve the "strength" of the soil and plant life, and they see the decline of fertility with mounting alarm.

Wouldn't it be possible to join with them in a new start by reflecting on bygone balance and the reasons for today's imbalance? Shouldn't we try to convince them that agronomy is simply looking for ways to find a new balance which would enable them to farm a single field uninterruptedly by preserving, even increasing, its fertility, its "vital strength"? Every time we've tried this experiment, we have been amazed to see how passionately the peasants, mainly the eldest, take to a debate. The modernization proposed to them thus takes on real meaning, since it is nothing if not a search by modern means for what the old-timers tried to achieve on their own. *Any observer would be surprised to realize to what extent these people, allegedly trapped in tradition, are aware of the need to adapt to the new times. "You need this year's dogs to hunt this year's hares," say the peasants of Niger.*

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[2] Italics supplied.

What we must put to them, therefore, is not still other fragmentary haphazard technical themes, handed out with no better argument than "Do what you're told; you'll see the results," but instead a strategy of total modernization, a new way of farming to attain a new balance between men (more of them) and the land (less of it available). This new method of farming should not be taught to the individual but rather to the group, the basic community whether village, sector or hamlet, confronted with problems which most often can only be solved collectively. It is indeed curious that, while the "group dynamic" is all the rage in the West, agricultural extension in Africa has never exploited the instructive values of the tradition of the palaver—which is not idle chit-chat, as too many technicians still think of it, but down-to-earth analysis of an issue and a joint search for solutions, which require "grouped heads."

Does this mean that the villages will be asked to adopt a total modernization strategy right off the bat? To leap abruptly from one agricultural system, which thinks fallowing is the only known way to restore fertility, to a nonstop agriculture calling for crop rotation, fertilizers, forage crops and integrated cattle breeding? Just stating the problem shows how unrealistic this would be. Therefore we propose adopting "significant sequences"—the sum total of complementary technical innovations, the effects of which will already be altogether evident—but making it clear that this is the beginning of a process which has meaning only if it is brought to its logical conclusion. And here lies the essential difference between our plan and the extension currently practised. In the same way, peasants willing to try this new adventure will be sought out in every village. This is quite different from having pilot-peasants rustled up from outside and exhibited as an example by a foreigner. Instead of deviates threatening the community's equilibrium, they will appear, in the follow-up to preceding "discussion-negotiations" as village delegates to the experiment, as men who, on behalf of their villages, agree to take risks which the whole village could not run at one go.

We purposely speak of discussions-negotiations in the plural because they obviously involve a *process* which must—and can—continue over a certain length of time if we hope to win peasant comprehension and commitment to such a degree that it will not be impugned as soon as the first difficulty crops up.

Beginning with this initial reflection—which should be applied to a group of villages, with an extension sociologist and an agronomist participating—how do we move on to the phase of so-called popularization? In our view, like this:

You try to get a village—one of the villages that seemed to show the most determination during the discussions-negotiations—to act as a village-innovator, in other words, to try modernizing its entire village soil. The choice of village, of course, must have the full approval of all the villages concerned. This soil under experiment should be directly subject to agronomic research in the degree that it will function as a permanent testing ground for introducing innovations. The researchers will then be likely to discover that it wasn't so easy to apply simultaneously to all the crops the whole range of technical themes put to the isolated peasant crop by crop.

The objective of this approach would then be to make sure that innovations are propagated from that center to the neighbouring villages by fully backing up the peasant-innovators in each village who have agreed to experiment with the new methods. It goes without saying that such propagation must necessarily begin with visits to the peasant-innovators' fields, followed by group discussions to compare traditional and new methods. Naturally, propagation will spread all the faster if the people have been primed by discussions during the dry season. But there is another instructional system which can contribute as much to a speed-up: self-evaluation.

Indeed, in most cases, the evaluation of the results of an agricultural campaign is done exclusively by the technicians. This is an external evaluation, during the course of which the peasants' reactions are gauged. Then why not ask the people most directly concerned? Several experiments in that sense have shown us not only that this was possible [illegible] also that the results of such internal evaluations were sometimes quite different from the technicians' interpretations.

The method is very simple. You just take a given group of peasants, generally all from one village, and compare the results obtained by some of them in terms of the farming methods they have utilized. For this you don't need to have gone previously into area and weight measurements; instead, your reasoning will follow the peasants' reasoning, that is, compare the quantities of seeds sown with the quantities reaped. A simple felt board will enable you to visualize the results declared by the peasants themselves, hence to start the discussion going.

Vigour and Seriousness

Every time we tried this experiment we were overwhelmed by the vigor and seriousness of the discussions thus sparked. What's more, these discussions often bring to light various obstacles which are by no means subjective (such as the peasants' refusal to adopt such-and-such a method) but entirely objective. Thus, during a meeting to discuss self-evaluation practised along these lines in the village of Fanimana in the Befandriana region of northern Madagascar, it turned out that the limitation of the areas where rice seedlings were picked out was definitely not due to unmotivated peasants' refusal but because of objective reasons—the land wasn't levelled, seeds were lent at usurious rates, obliging the borrower to give half his crop to the lender—facts which had totally escaped the planners of the project.

What we must do today is adopt a new rural development philosophy in black Africa. Indeed, it is high time to take the African peasants for what they are—not children, and, still less, grown-up children, but responsible adults; not virgin wax to be moulded at will but experienced men who, for generations, have successfully maintained a difficult balance under difficult circumstances; not isolated individuals but solidary communities. Only if we see them in this light can we get them off to a new start.

Résumé of No. 18

The Chimaltenango Development Project in Guatemala

by Carroll Behrhorst (M.D.)[1]

Context of the Project

The majority of the rural populations of the world do not have sufficient food to enable them to have a normal growth and development; one out of four of the children of many groups dies before the age of one year; epidemic and endemic communicable diseases are a day-to-day reality; and maybe 80 percent of these people have little or no contact at all with what we call health technology, which is so often quoted as a shining example of present-day man's technological ingenuity and progress.

Despite the improvements that have taken place, the ground-level view is still one of swollen-bellied children playing in the dust of the village square, of lines of women carrying water, and of the scratching of little patches of land with a stick as the desert creeps nearer.

This book is about rural populations, but its main emphasis is upon health and health services. The relationship between rural hopelessness and health is a complex one. Ill health adds to hopelessness, but its removal does not mean that there is hope. We can describe endemic or epidemic diseases, stunted children, deaths occuring mostly in infancy and childhood, no help in an emergency, maternal deaths against such a background as we have indicated; but the background and the description would have to be different if the people were healthy and strong. We should have to add such qualities as hope, human dignity, a capacity for improvement and change, organization and responsibility, and mastery over one's own fate. The problem and the priority have to be the total rural hopelessness complex and not just ill health. We are only slowly beginning to understand that people themselves are aware that health may have a low ranking among the starting points for change.

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[1] Reprinted with permission of the publisher from "Health by the People," World Health Organization, Geneva, Switzerland. The material on "Context of the Project" is taken from the Introduction to the book.

After some introspective comments, particularly from the viewpoint of the medical profession, about the causes associated with the complex problems indicated above, the author observes that many of the 'causes' of common health problems derive from parts of society itself and that *a strict health sectoral approach is ineffective, other actions outside the field of health perhaps having greater health effects than strictly health interventions.*[2] If we do not consider our restricted approach to be valid, then our reaction to its rejection is even more strange. As the health services fail in their bid for additional resources to further their priorities, the health professions turn their backs on the problem and direct their energies towards developing additional methods for helping the privileged people who can both afford and appreciate them.

The discussion of the Chimaltenango Project which follows illustrates how some of the problems have been dealt with quite successfully, in an evolutionary way, over the past twelve years.

The Clientele of the Project

The clientele of the project are the Cakchiquel Indians, who are representative of three million agrarian Indians who are eking out a living in the highlands of Guatemala. Their culture is linked very closely to the great Mayan culture. They are a proud and dignified people, but woefully poor and unhealthy. Such wealth that they have had historically and at the present (in spite of increased wealth generally) is concentrated in the hands of a few. Many are without land and many more with very small holdings of poor land. Infant mortality is among the highest in the world. Respiratory infections, malnutrition, intestinal and other disorders which are endemic are not only the primary causes of death but diseases like tuberculosis, whooping cough, measles and influenza, which have been virtually eliminated in the rest of the developing world, are also high on the list of fatal diseases.

Despite the presence of these debilitating diseases, which would suggest that curative medicine should be a first priority, the consensus of opinions of the people and medical personnel has not borne this out. More specifically, the priorities are:

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[2] Italics supplied.

1. Social and economic justice
2. Land tenure
3. Agricultural production and marketing
4. Population control
5. Malnutrition
6. Health training
7. Curative medicine

While the "tools" which Dr. Behrhorst and his associates had to *start* with were medical in nature, they evolved into a variety of services which will be described in the following sections.

How the Project Began

The project was started in 1962 by Dr. Behrhorst, a medical practitioner from the State of Kansas, USA, with the opening of a clinic in a rental building. He spent three months listening to and visiting with the Indians. Gaining their confidence was a first priority. The needs for curative medicine were so great that problems appeared to be comparable to trying to empty the Atlantic Ocean with a "medical teaspoon." Visits to the homes and rural environments of persons who came to the clinic revealed the fact that about every child seen was malnourished and diarrhea was common in both adults and children. Linked to these conditions was the protein-poor, almost exclusive diet of tortillas and vegetables which, in turn, was linked to the miserably small plots of poor land. Off-farm work on the coffee fincas also contributed a variety of tropical ailments, including tuberculosis. It was apparent that the medical problems could not be solved unless basic changes were made in the villages. To give effect to this decision, an experimental area eight kilometers from Chimaltenango was chosen. Earlier, in this area, an agricultural project was launched which emphasized better farming methods and the raising of chickens and production of eggs. These foods began to add some much needed protein to the diets of the Indians. Later in the evolution of the program in the first experimental area, a "health promoter" and extension workers in nutrition, health care and farming methods were appointed. Financial assistance in the form of loans was also made available to groups of families who banded together to purchase land. Women's weaving clubs were started to augment the small earnings from farming. Thus, the experimental beginnings of a variety of medically and non-medically related programs were made, which are described more fully in the subsequent sections.

The Hospital

The apex of the medical facilities is a very modest hospital which is designed to foster involvement of the families of the patients who stay with them, prepare their food and provide basic care. This procedure not only makes possible minimum charges of $.75 per day for all hospital services (exclusive of ambulances and transportation costs but including medicine), but a more humane method of providing services. Thus the plan not only makes treatment financially possible, but more culturally acceptable for the approximately 200,000 inhabitants of the Chimaltenango area.

Health Promoters

It became evident after the first few years of experience of providing medical services at the hospital to 125-150 patients per day, that a bright Cakchiquel, given a certain amount of inexpensive training, could treat the most common diseases (75 percent of which are diarrhea and pneumonia) just as well as a university trained doctor. These persons were called health promoters. Inasmuch as the promoters, after training, served in their home communities, it was decided to give the task of selecting them to community betterment committees. It was found that this procedure produced more acceptable candidates than those recommended by priests or Peace Corps Volunteers. The seventy or more promoters who have been trained and are now serving these communities have an average of a third grade education. Each of the promoters typically treats over one-thousand patients per year.

Non-Formal Training Program

Promoters are trained once a week for a year before they can give injections or dispense medicines. But the training process is *continuous*[3] on a once-a-week basis because, in part, monthly examinations are given to promoters in which they must describe how they diagnose patients' problems and what remedies they provided. Some of the promoters have continued in the training program for as long as eight years. A key element of the training involves going on the hospital rounds with the doctor or supervisor plus demonstrations. Lectures, films, readings, and other educational methods are used but these are considered as supplementary to the actual observations of the patients with doctors or supervisors. Emphasis is given to *symptoms* rather than disease. Promoters are taught the *limits* of what they can do as well as practices which they can properly undertake. Complex cases are not only referred to the hospital, but transportation of the patients is arranged if desired by the patients. Medicines are sold to promoters by a three-man community committee which purchases the medicines from a central source. The price of medicine is controlled and medicines are limited to those of minimum risk to the patient. Promoters are encouraged to collaborate with local *curanderos* (medicine men). Promoters can charge US $.25 for each service. They may be disciplined, or recommended for dismissal if the community committees are not satisfied with their services. No compensation is provided beyond that provided by the committee for services rendered.

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[3] Italics supplied.

The training program is buttressed by careful supervision which occurs regularly in the form of on-the-job visits by superiors who examine records of patients visited and provide counsel and advice to the promoters. On days when the promoters are not in training they engage in community service as described below.

The cost of training seventy promoters is judged to be less than the cost of training one sophisticated doctor.

Extension Services: Public Health

Women have been brought into the program largely in an extension program which involves nutrition, sewing, home gardens, raising of chickens and any other subject, like embroidery, of interest to village women. Interest in family planning evolved *after* the other programs were found to be useful. It became an *integral part* of the family decision-making process. Examinations, dispensing of supplies and other actual planning services are performed exclusively by Indian nurses.

Extension Services: Agriculture and Economics

Agricultural Extension services are focused on the problems of small subsistence farms—seeds, fertilizers, minimum technology and credits. The latter was, in the early stages, supplied from a revolving agricultural fund which was later replaced by a multipurpose cooperative, which is involved in savings and credit for a variety of needs, including, as the most complex, loans for the purchase of land. It is generally recognized that the problems caused by absentee landlords can only be solved on a satisfactory basis by ownership of the land by the now subsistence farmers.

The costs of the above extension services are provided from external sources at present but are expected to be self sustaining. The Lutheran Church and other organizations have provided the necessary external funds.

Guidelines for Providing Public Health Services for the Rural Poor

The author offers the following major (and several minor) guidelines for the "reproducibility" of the program for the rural poor. (Italics having special reference to non-formal educational methods are supplied.)

1. In poor areas of the world, as elsewhere, medicine must be practiced for the benefit of the patient, not for the convenience and welfare of the doctor. *Public health work should begin with a dialogue with the people encouraging them to consider themselves and their situation and to state their needs.* The effective professional *listens before he acts*, treats his patients as an equal in decision-making and does not force his own ideas and standards on those he serves.

2. A program that relies too heavily on outside technical and financial assistance is destined for trouble. *Almost any technically trained person, regardless of nationality, is considered an outsider in the vast areas inhabited by the rural poor. The poor man is no fool and he must be convinced that the technocrats' arguments are valid before he will risk deviation from age-tested patterns of living, especially if he has to pay for the change.*

3. Nationalism is perhaps one of the most difficult problems facing innovators in a developing country. Most native professionals are as alien and as suspect to the rural poor as the foreign professionals, separated as they often are by formidable racial, linguistic, and cultural barriers . . . .

4. Beware of the cry for "higher standards." Professionals love to boost "standards" for any program, thereby driving up the cost of equipment and expertise and putting the program beyond the reach of a humble community. Quality should never be equated with high cost.

5. A public health program aimed exclusively at curing the sick will have little effect on the health of the rural poor. A program which includes preventative medicine, nutrition, and hygiene will fare somewhat better. However, a program that fails to deal with the fundamental problem—ownership of the land—will meet with no more than modest success.

6. The truly successful public health program among the rural poor must tackle basic problems of economic and political development. This by no means indicates that program leaders should plunge into controversial national issues or ally themselves with specific political movements. A program must be detached from factional politics if it is to respond to the people without power. Yet, there are levels below those of national politics where the people can learn to control their own lives through politics and economics. A cooperative is a good example since it responds to financial need and builds local leadership. The cooperative is no panacea, but it is often a practical move in the right direction, laying a foundation for people power in the politics of survival.

7. *The stronger the orientation toward those being served, the more successful the program is likely to be. The essential first steps are: listen to the people, appreciate them, love them, take them into your confidence, and try to be at one with them.*

8. *Local community health committees should be organized before the first aspirin or dressing is handed out.*

9. *Training programs should permit trainees to continue their usual work, family, and community relationships, with absence from home kept to a minimum. Training programs at distant centers often disrupt family and community links and may corrupt the trainee by exposure to a foreign culture and life style that makes return to his community difficult and sometimes impossible.*

Medical training demands the use of clinical teaching on patients in either a dispensary or hospital. Trainees must be taught what not to treat as well as what to treat and how. The supervision and continued education of lay curers is essential to nature of the supervision depending on local conditions. The fees should be decided locally and the central agency should never put anyone on the payroll.

10. Health has many facets, economic, political, and social. Each must be taken into account when the epidemiology of any health problem is being considered. Proper care of any ailment, physical or social, demands dedication to the treatment of causes, not merely the amelioration of current pain.

Excerpts from No. 19

China's Experience with Development Communication: How Transferable is it?

by Wilbur Schramm, Godwin C. Chu, Frederick T. C. Yu

East-West Communication Institute[1]

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[1] Reprinted, with slight modifications, with the permission of the publisher, from *Communication and Change: The Last Ten Years—and the Next*, edited by Wilbur Schramm and Daniel Lerner, copyright © 1976 by the University Press of Hawaii.

[2] In the fall of 1973 a distinguished group of China scholars met to evaluate China's developmental experience, primarily in terms of its usefulness to the United States but also to other developed and developing countries. See Michel Oksenberg (ed.), *China's Developmental Experience*, New York: Praeger Publishers, 1973. (Material in this book previously appeared in the *Proceedings of the Academy of Political Science*, Vol. XXXI, No. 1, March, 1973).

Résumé of No. 20

Credibility and Competence: Key Characteristics of Development Communicators

by Francis C. Byrnes[1]

Director, Training, Research, Communications

International Agricultural Development Service

Reports and field observations document and demonstrate the inability of many agricultural change agents or change systems in the developing countries to bring about significant or rapid adoption of improved technology among farmers or their families. Administrators and analysts offer many reasons for this. Some blame poor communication. Still others fault the organizational structure, or the lack of significantly improved technology to extend.

Observers of the problem of the failure of agricultural change agents described above have concluded that an important—perhaps critical—component is that they "lack credibility." More specifically, that they do not command respect, attention, trust or acceptance, because farmers have learned through the years that many are not technically competent, lack farming background experience, have little to extend of economic or technical value, and, in addition, are deficient in the communication practices or skills the circumstances require.

Successful agricultural agents, in contrast, help farmers to increase agricultural productivity because they are able (a) to test and adopt new technology in specific farming situations, i.e., in the farmer's own backyard; (b) to diagnose the farmers' production problems, and (c) to *teach* the farmer how to correct problems and increase yields. Frequently, they do much more,

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[1] Paper prepared for presentation in "Information and Communication," and reprinted with permission of the author. Problems in Development Section, Third World Congress for Rural Sociology, University of Louisiana, Baton Rouge, August 1972.

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such as help him obtain credit, advise him on management, and suggest ways to store or market his crop. *Improved competencies foster credibility.*

The author then proceeds to describe training programs conducted by the International Rice Research Institute (IRRI) in the Philippines, designed to train personnel to extend improved rice growing technology; a livestock production specialist training program and a crop production specialist training program in Colombia. He also cites other programs which follow the same principles. Some of these are summarized in the following:

IRRI Program

Based on a teaching formula which was epitomized by the expression, "You can't teach what you don't know," this idea was coupled with another, that getting farmers to adopt new technology is primarily an educational goal, requiring instructional techniques, rather than promotion, advocacy and persuasion.

The training program included the following major components: (a) about one-half time in the fields producing rice; (b) the balance of the time was used in problem-solving assignments, reading and discussion exercises, preparation of and administration of diagnostic tests, attendance at seminars, field trips and interviews with scientists in the laboratory and field. The net effect of these exercises helped trainees learn what they know and don't know. A coordinator-trainer also served to help the scientists improve their teaching techniques and to assure that the trainees grasped the relevance of what was being taught.

Training of Livestock Production Specialists–Colombia

The training program involved (a) two months of intensive testing and instruction in a wide range of subjects, including animal health, nutrition, pasture improvement, ranch management, sanitation, engineering, economics and communication, and (b) nine months living on ranches in teams of two.

Training of Crop Production Specialists–Colombia

The field crops included corn, rice, cassava, sorghum, soy beans and field beans and fifteen vegetable crops.

The training program included (a) management, by teams of four, of production on 15 hectares of land while spending two days a week working with small farmers in a neighboring community on which small scale replicated trials were performed to validate the new technology, and (b) about half-time on lecture-discussion on the technical aspects, economics, communications and training (behavioral change objectives) related to the crops being demonstrated. Another component of the training program involved serving as interviewers in a study of 300 small corn farmers, which produced an unexpected byproduct of gaining insight with respect to the problems of small farmers.

Some of the obstacles noted by the author for the conduct of such intensive training programs are:

1. The need for such training is not readily admitted or recognized by decision-makers or potential trainees;
2. Returning trainees have difficulty using their training and particularly in organizing training where they can train others;
3. Aside from the technical and methodological training, the program, if it is to be successful, must develop or stimulate in each trainee a burning sense of personal commitment, responsibility, and urgency with respect to his role in the development process.

Résumé of No. 21

The Rural Public Works Program of East Pakistan

by A. M. S. Ahmad[1]

Former Secretary of Basic Democracies and Local Government

Now with the World Bank

The Rural Works Program in East Pakistan (now Bangladesh), conducted in 1962-67, had aroused considerable interest in the sixties, both domestically and internationally, because of the extensive productive assets and large employment created under it. The program aimed at and succeeded in mobilizing the initiative, energy and capacity for learning of the rural people. It gave them the confidence that they could acquire the necessary competence to shoulder the responsibility for rural development. The program, which was initiated on an *ad hoc* basis in 1962, became a part of the national Five-Year Plan for 1965-70. The 1965 Survey of the Economic Commission for Asia and the Far East included the Rural Works Program as a case study on manpower utilization. For varied reasons, the program suffered a decline in the closing years of the sixties, but continues to be considered as important for rural development; efforts are now underway to reestablish the program on a sound footing. The earlier experience, however, demonstrates that large economic and human resource development benefits can be derived when rural people are fully involved and enabled to play their role in development.

Setting

The setting for the public works program had the following major attributes: (1) population density exceeding 1,000 per square mile; (2) average size of farms below 3 acres; (3) 75 percent of population engaged in agriculture, which was wholly dependent on the monsoon; (4) 25 percent of rural population were landless; (5) very high unemployment particularly for five months of the year; (6) widespread illiteracy and extreme poverty, and (7) the tradition of large development schemes, whereas the need was for small drainage, rural roads and similar projects which could be planned and carried out by village-based institutions.

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[1] Prepared by the author for the conference.

Among the more significant factors in the setting was the system of government then in force called "Basic Democracies." The lower two tiers of this system—union and thana councils—provided a political and operational framework which was useful for planning and administering a public works program which could focus on relief of unemployment, improvement of rural infrastructure and foster decentralized local leadership, governmental efficiency, and political responsibility.

The elections of union council members (who constituted electors for election of the President and members of the legislature), provided an excellent forum to explain to the villagers the powers and rural development responsibilities of local government institutions. The information campaign for the elections, which brought out record high participation, included radio broadcasts and training programs for officers of government on *their* responsibilities for rural development, and of chairmen of union councils and other rural leaders in discharging their obligations to their electors.

Scope of Rural Public Works Program

Prior to the launching of the massive public works program administered during the 1962-67 period, union councils spent a large percentage of the taxes raised for roads, drainage and irrigation canals and flood protection embankments which were of insufficient scope to meet the urgent needs for improvement of the rural infrastructure or the needs for relief of rural unemployment (particularly of the landless laborers) and underemployment. Nevertheless, the experience gained provided an experiential basis for launching the 1962-67 program which utilized $150 million of United States/Pakistan Government Public Law 480-generated funds—88 million of which was spent by union and thana councils in rural areas. (The balance of the $150 million was used by district councils and municipalities for feeder roads, streets, drainage and sanitation). The funds expended by union and thana councils resulted in: (1) the construction or repair of 98,000 miles of earth roads; (2) building of 11,000 miles of drainage cum irrigation canals, which benefited three million acres of agricultural land; (3) the construction of 3,000 community buildings, and (4) 208 million man days of seasonal employment.

The execution of each of the projects was entrusted to a project committee which in 1964-65 numbered 33,704, and on which 187,266 local leaders served. Land required for development projects (roads, irrigation and drainage canals) was contributed and the local leaders were not compensated in any monetary form. The prestige, authority and responsibility conferred upon them, however, brought out their best qualities and apparently provided non-monetary satisfactions. Workers on the projects were paid wages at the going industrial wage rates and not "famine relief work rates."

Policy and Procedures for Operation of the Program

The policies and procedures for operation of the vast program had the following attributes:

Councils had full and free scope to identify, develop and execute programs under policies, guidelines, instructions and operating manuals which were developed by the small staff of the Secretary of Basic Democracies and Local Government.

Allocation of funds was made to 4,000 union and 400 thana (local government) councils on the basis of population to avoid political manipulation.

A demonstration model for the execution of the works was developed by the Academy for Rural Development in the first year of the program. This model which was adopted for the balance of the program emphasized:

1. Participation of the people in the identification of possible projects which were discussed at village meetings called by the village member elected to the union council.
2, Submission of the recommendations of the village meeting to a special meeting of the union council.
3. Execution of the projects selected by the union council by *project committees* instead of by private contractors. The project committees mobilized local labor, collected materials, secured the services of skilled or semi-skilled persons (e.g., stone masons) for the project. Each project committee appointed a secretary to keep accounts.
4. Training of government functionaries on the policies and guidelines of the program and on procedures for collabo-

ration with non-official members of the union and thana councils.

5. Training manuals for the use of project committees and union councillors in the administration of the program.
6. Annual evaluation of the program in terms of the extent to which the policies and procedures laid down by the government were adhered to and also to find out problems in the administration of the policies and procedures which needed correction.

Non-Formal Education and Training

Non-formal educational methods and materials were of central importance in the organization and administration of the vast program. The policy of involving villagers and their elected officials and project committees at the lowest, decentralized level of government in the planning, selection and execution of projects provided a framework which maximized the opportunity for and need to utilize non-formal educational methods. The continuous training and supervision of government officials to support, through their attitudes and actions, the policy of decentralized decision-making and execution of projects to union councils deviated somewhat from normal bureaucratic procedure. The preparation of operating manuals, which were of central importance in the management of the program, involved non-formal educational methods in securing the judgment and expertise of many persons in their production, and also in their use in training sessions for village leaders, project committees and others. *Learning by doing* occurred at all levels of work, whether at the level of policy formulation, organization, administration, or at the level of skilled and unskilled labor on the projects themselves.

In Retrospect

In retrospect the author indicated that the achievements in physical terms under the East Pakistan Rural Works Program were impressive. Perhaps more important than these was the evolution of a system for mobilizing and harnessing the latent capabilities of the people and a procedure for augmenting their technical, administrative and managerial skills on a massive scale. The heart of the system was the character of rural institutions which encouraged, and more often challenged, the rural leaders to prove their leadership qualities.

As for possible application of the East Pakistan experience to other developing rural societies, the author offered these observations:

1. The first requirement is the selection of locally implementable and complementary sets of projects which are critical for increasing agricultural production.

2. The second is the need for genuine and continuing involvement of the people in the decision and implementation processes in order to achieve economical initial construction or to ensure maintenance of completed projects. Furthermore, a workable and self-regulatory system for involvement of the people has to be evolved and adapted to local candidates.

3. Leadership positions must be filled by the capable and dedicated members of the community. What must be avoided is the foisting of leaders chosen by the functionaries or other external agencies on the people.

4. Involving the people and entrusting a critical role to them are worthless gestures without provision for needed support—technical, administrative and financial. Support should be designed not to stifle local initiative and pride but to enhance them. This calls for striking a balance between centralization and decentralization which will differ from country to country.

5. A rural public works program of significant size will result in noticeable political dividends, particularly in countries in which elections to political offices are held on the basis of universal adult franchise. A government sponsoring such a program stands to gain big politically if such a program is run honestly and effectively. However, because of the political impact of such a program, temptations to interfere with it for political reasons are great and pose a serious threat to its integrity and effectiveness. It is necessary to devise ways and means to cushion the program against such political manipulation.

6. Extensive, repeated and practical training is basic for achieving the objectives of involvement of the people. People can learn and learn quickly if an effective learning process is established—a learning process which is essentially based on *doing* (italics supplied) and which enables the government to respond to the often fast evolving learning needs of the people.

7. A frequently suggested panacea suggested for implementing small-scale rural infrastructure projects is "self help." Self help schemes mostly penalize the poor as it is they who labor and get nothing in return. The poor do not want to volunteer labor—they want employment for wages.

No. 22

Liberation, Development, and Rural Non-Formal Education

by Thomas J. La Belle*

University of California, Los Angeles

[Ed. Note: This article is based, in part, on a paper prepared for the Overseas Development Council, which was presented to the Workshop of Voluntary Organizations Concerned with Overseas Rural Development, in Asilomar, California, 15 April 1975.]

Nonformal education refers to organized out-of-school educational programs designed to provide specific learning experiences for specific target populations. Normally associated with so-called "underdeveloped" countries, such educational efforts include agricultural extension, community development, consciousness raising, technical/vocational training, literacy and basic education, family planning, and so on. The programs are generally designed to improve the participant's power and status by either adding to his or her stock of skills and knowledge or by altering basic attitudes and values toward work and life. While these out-of-school programs are not new, they are currently receiving considerable attention from educators, social scientists, and planners as instruments to reach both marginal urban and rural adults and youth for whom the school has been shown as inappropriate or unavailable.

Formal, Nonformal, Informal Education

In practice, the definitions of these three educational models are typically taken from Coombs and Ahmed who equate education to learning on a continuum from informal to formal. Informal education is defined as "... the lifelong process by which every person acquires and accumulates knowledge, skills, attitudes and insights from daily experiences and exposure to

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*Reproduced by permission of the Council on Anthropology and Education for the *Council on Anthropology and Education Quarterly*, Vol. VI, No. 4, November 1975.

the environment. . . ."[1] Coombs and Ahmed define nonformal education as ". . . any organized, systematic, educational activity carried on outside the framework of the formal system to provide selected types of learning to particular subgroups in the population, adults as well as children." The major difference between these two processes rests with the deliberate instructional and programmatic emphasis present in nonformal education but absent in informal education. The third mode of learning used by the authors refers to the ". . . institutionalized, chronologically graded and hierarchically structured educational system, spanning lower primary school and the upper reaches of the university."[2] As Rolland Paulston has suggested, it is possible to view these three types of education through a concentric circle model with formal education at the center, followed by nonformal and informal education in the subsequent rings.[3]

While I have little difficulty accepting the definitions of Coombs and Ahmed or the concentric circle model of Paulston, I believe we have come to view these educational modes as discrete entities rather than as modes of emphasis or predominance. As discrete entities, for example, we have viewed nonformal education as including only the instructional aspects associated with micro social change efforts rather than including the informal learning which occurs from simple participation in the efforts. As an example, the student of nonformal education interested in producer cooperatives or community development projects is constrained by the definition of nonformal education to look only at the technical assistance process, the role of the change agent, or the instructional products used in fostering the success of the project. What we may be failing to include, however, are the informal learnings which take place as individuals come together in the cooperative or community development process. These are the informal education experiences associated with learning from each other and from the process rather than from the deliberate nonformal education instruction. Another example to show the problems derived from treating the definitions as discrete entities exists when an individual looks at informal education. Let us assume that an educational anthropologist is studying child rearing practices in the home and neighborhood of a rural family. Generally, this kind of education would be referred to as informal education, given the Coombs and Ahmed definitions. The educational anthropologist, however, encounters directed, preplanned instruction by parents to their children in the areas of cooking, weaving, cultivation, planting, and so on. The question now is, need we classify this parental instruction as nonformal rather than informal education?

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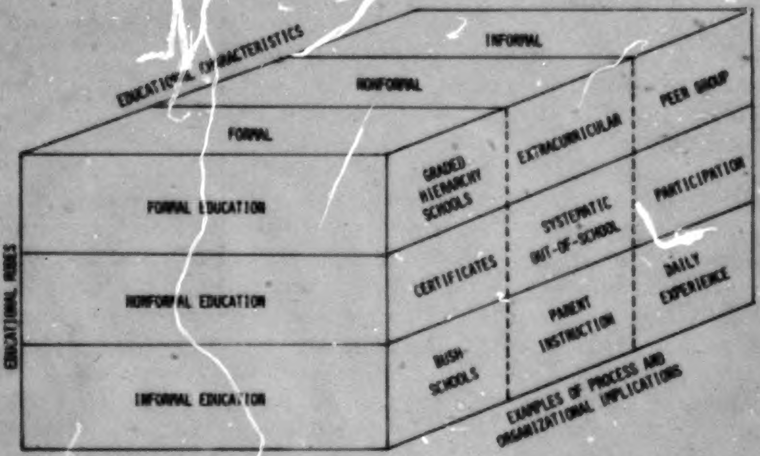
[1] Philip H. Coombs and Manzoor Ahmed, *Attacking Rural Poverty. How Nonformal Education Can Help*, Baltimore: Johns Hopkins Univ. Press, 1974, p. 8.

[2] *Ibid.*, p. 8.

[3] Rolland Paulston, *Non-Formal Education. An Annotated International Bibliography*, New York: Praeger, 1972. Paulston actually includes a fourth, or international education, ring in his model.

FIGURE 1

FORMAL, NONFORMAL, AND INFORMAL EDUCATIONAL RELATIONSHIPS



All of this leads me to Figure 1, which attempts to treat formal, nonformal, and informal education as predominant educational modes rather than as discrete entities. In terms of the formal education mode, for example, we can take the formal characteristics of formal education and arrive at the Coombs and Ahmed definition of formal education or the school. Nonformal implications of formal education might be extracurricular activities, while informal implications might be peer group processes. Within the nonformal education mode, the formal characteristics might lead to the granting of certificates, the nonformal characteristics to the out-of-school definition of C[illegible] and

Ahmed, and the informal characteristics of nonformal education to institutional participation. Finally, within the informal education mode, there might exist formal characteristics in simpler societies associated with bush school or schools for Shamans, nonformal characteristics associated with deliberate parental instruction, and informal characteristics of informal education which lead us to the informal education definition of Coombs and Ahmed.

My major concern in attempting to broaden the perception of these educational processes lies with the potential of including the secondary characteristics of each mode in an analysis of any one mode. Thus, in nonformal education, I need not be constrained by the implications of the Coombs and Ahmed definition to isolate only the instructional aspects associated with micro social change efforts but can also be concerned with secondary, and potentially more important, participatory experiences in terms of learning outcomes. I believe the model in Figure 1 assists in interrelating these educational modes in a more fruitful way.

Let me turn now to the second issue which concerns me here, the too-explanatory frameworks assessing underdevelopment that provide direction to nonformal education efforts. In order to narrow the discussion, I will direct myself to rural programs and draw upon primarily Latin American references. I will begin by briefly sketching some characteristics of the rural peasant farmer and then present the two theoretical orientations of dependency-liberation and deprivation-development, followed by their implications for non-formal education programs. Finally, I will attempt to relate the two theoretical positions to see whether any cross fertilization can occur.

The Rural Farmer

First, let me turn to the subject of the analysis, the rural farmer. His most important institution is the family unit. He relies heavily on his female mate for organizational and administrative assistance in managing the farm household and on his youth for additional work assistance in planting and harvesting. The land he works, while it may not be his own, is his unique resource. It is, however, diminishing in both its production value and its size. He may be a sharecropper or tenant farmer who works for wages on the side; his security is dependent on the whims of the landowner. The rural farmer is also susceptible to the influences of intermediaries—maybe at the mill, in transporting his goods to market, in securing credit, or at the marketplace. His small harvest makes him impotent if prices decline or consumer demand falls, and as an individual he has little impact on the national market. As a consumer, however, he is confronted with attractive items which he buys but cannot afford and which often increase his indebtedness to others. The rural farmer is likely to have been socialized as an individual, accustomed to working alone; he does not necessarily identify with community or national organizations. Except for major rites of passage or emergencies, the farmer gives to and expects little of others. He is pushed and pulled by economic and political pressures centering on agricultural reform, land tenure, credit policies, and so on. As an illiterate, he must depend on others to provide him information on these and other matters. Even if he knows that he needs fertilizers, seeds, credit, or machinery, he may not know how and to whom he should turn. Finally, the rural farmer experiences and is surrounded by individuals in poor health. While he may evidence all or some of these characteristics, he nevertheless has considerable individual pride. He is also more knowledgeable about the constraint under which he works and the activities he must perform in order to feed his family and remain in business than many outsiders are willing to acknowledge.

The plight of the rural farmer can be assessed in two analytically separate yet interrelated ways. These positions are referred to here as the positions of dependency-liberation and deprivation-development. Both positions have implications for the programmatic response of social service agencies and the role of education. First, the dependency-liberation theorists.

Dependency Liberation

The advocates of a dependency-liberation theory might explain the farmer's situation in terms of external and internal economic and political controls. External dependency is created when relationships among nations are conditioned by a dominant economic partner as with many Latin American nations and the U.S. Interdependency is thus shaped by the economic expansion or lack of expansion of the dominant nation. Internal dependency is often viewed as the counterpart to external dependency in that the rural peasant's social position and his viability as a farmer are conditioned by his own nation's social structure in which the elites are the economic decision-makers. Dependency-liberation theory can also encompass, in addition to economic matters, such phenomena as the mass media, legal structures, religions, and technology. In each case, the individual farmer's life is conditioned by the decisions made by others whether they be in his own or another country. He is, in fact, dependent on the articulation between his own nation's elite and the elite of other countries in terms of the product he produces, the price he receives for his product, the technology he needs to plant and harvest, the legal system within which he must function, and so on. Many of the dependency-liberation theory propositions are aimed at the capitalist economic system which, in its basic operation, encourages individual dependence on wider political and economic processes.

The wider goal of educational programs responding to dependency conditions is liberation both as a process and as an objective. Liberation seeks to enable the individual to overcome domination and vulnerability. It does not necessarily measure outcomes in terms of income or material benefits gained but instead by the processes which take place. Liberation is concerned with a more equitable distribution of decision-making power leading to control over the change process rather than adjustment to it.[4]

While the dependency-liberation theorists may or may not be providing convincing arguments, they nevertheless have made considerable impact at both the popular and the policy-making levels in Latin America. The educational implications of the dependency theory are as yet unclear. While such names as Illich and Reimer are associated with some of the dependency-liberation orientations, they are not definitive as to what shape educational programs might take in accord with dependency conditions. I sense that the purest and most articulate response by an educator is that offered by Paulo Freire. Briefly, Freire offers a humanistic response, supposedly non-manipulative, in which the peasant is viewed as a subject, not an object, of reality. He suggests that the transformation of society and its social structure must be based upon the reflection and action of individuals who opt for the humanization of man. The educator or change agent in this process must be aware of reality and cannot claim neutrality toward the world. At the same time, however, the educator cannot prescribe his own option to others as that is manipulation and inevitably leads to the dehumanization of man. Freire's response to dependency, therefore, is *concientización*, or consciousness raising. The result is individuals who are aware of their reality, who have reflected on it and criticized it, and who opt for changing it in accord with humanistic principles.

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[4] Denis Goulet, " 'Development' . . . or Liberation?" *International Development Rev.*, XIII: 3, pp. 6-10, 1971.

In Latin America today, the term "concientización" is easily found in private and public agencies as a basic premise underlying social change programs. Many educational reforms in recent years have incorporated some aspect of consciousness raising in their out-of-school and extension activities. While the term has taken on programmatic orientations different from that intended by Freire, often leaving in its wake little more than the objective of a more aware peasant population, there are many who are committed to the underlying principles as well.

While the consciousness-raising response to dependency takes several forms, the process generally involves a group-oriented dialogue between and among peasants and a coordinator. Freire designed the dialogue around the reality of the individual through the use of photographs or drawings which portrayed the environment of the participants. He also applied the process to literacy training in which individuals confronted with a pictorial representation of their reality, would learn to read and write the words which they themselves use to portray that reality. Since Freire's work in the early 1960s, other variations of the consciousness-raising theme have emerged. One of these, until recently known as the "total language" approach and now referred to as "pedagogy of communication," builds upon the confrontation with reality premise but expands the process by including objects from the mass media. In other words, instead of using symbolic representations of one's environment, all phenomena transmitted by the mass media are used as objects. The praxis or action dimension following dialogue and reflection around the object can then take the form of art, music, dance, or oral and written expression. The pedagogy of communication program has been spearheaded by Catholic educators in Latin America and can be applied in and out of formal educational institutions. Another programmatic example of the consciousness-raising theme is currently being used in Ecuador by the University of Massachusetts under AID support. This program is built around games like Monopoly, through which individuals engage in simulating the conditions of life and thereby increase their awareness of the legal, political, and cultural constraints which operate in their environment.

One final example of an educational response to dependency is in order. Known as "rural animation," this response was initiated in Senegal and has recently appeared in Central America. The orientation here is again dialogue and reflection but it takes a somewhat different form. Village representatives are invited to participate in a 3- or 4-day meeting around their verbalization of needs and interests in conjunction with a group of individuals known as the animation team. Issues normally revolve around taxes, politics, change, and so on. Role-playing, sociodrama, and other forms of participatory activities are used to address the issues. After the meeting, the delegates return to their villages to discuss similar issues. The process is open-ended, highly participatory, and places considerable stress on group decision-making and action. The idea centers on enabling peasants to articulate their own needs.[5] While rural animation can be used as a preliminary step toward organizing a village for community development type activities, it need not be forced in a particular direction.

From my point of view as an educator, the major lesson from the dependency-liberation theory advocates concerns the ways in which educators perceive and treat participants. Dependency-liberation theory advocates have, like educational philosophers before them, demonstrated that our pedagogical methods have involved primarily a vertical relationship with teachers dominating and students passively following. We have assumed that people are empty vessels waiting to be filled up with information that we believe they should know. Missionaries, technical assistants and extension agents have been as guilty of fostering such "banking" approaches to the educational process as have teachers in schools. Educational anthropologists can add greatly to an enlightened perception of rural farmers as collaborators rather than as students, as knowledgeable rather than as empty vessels, and as products of their environment and culture rather than as culturally deprived.

While educational program responses to dependency conditions have generally taken these liberation orientations, there is little evidence to suggest their impact. In fact, some might argue that they cannot be evaluated. The problem I have with many of these problems is their complete reliance on the peasant to take action on his own. The assumption appears to be that once a peasant is aware of his reality, he will develop constructive channels to change that reality in his favor. I would argue that he is as likely to become frustrated as he is to take action. He may be prepared psychologically for an impending revolution, but he has not been given any tools with which he can change his environment and he has not been informed of alternative channels to which he can direct his energies.

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[5] Jean-Pierre Ryckmanus, "Rural Animation. Its Methods and Potential," *Convergence*, 4:1, p. 14, 1971.

Deprivation Development

Let us turn now to the deprivation-development theorists. Here the plight of the rural farmer may be assessed in terms of his lack of opportunity within the wider social structure, his lack of technology, and his lack of information and motivation. The assumptions underlying most development-oriented arguments center on one or more of these three deprivation factors. It is suggested that underdevelopment exists because the inhabitants do not share, among others, the same organizational and decision-making structures or modern attitudes and entrepreneurial behavioral patterns common to so-called developed countries. In any case, underdevelopment is normally viewed as a phase which all countries may have experienced and one which can be altered through interventions involving primarily technology and capital.

The three orientations of development reflect the three deprivation factors mentioned as social structure, technology, and information and motivation, and can be seen in the real world among existing development programs. I should now like to briefly touch on these development options while contrasting them with those of the dependency liberationists. I will argue that none of the three orientations is appropriate except as they can come together in a mutually reinforcing effort and that education is needed and applicable in all three.

First, the social structure. Clearly, the peasant I described initially is dependent upon the relations he has with many others as he attempts to produce a product. Like the dependency-liberation theorists indicate, he is conditioned by the decisions of the elites in his own community, the nation, and in other nations. The social structure bias in development programs may be manifested in projects which emphasize the elimination of intermediaries who run the mill, own the trucks, and provide the credit. These intermediaries drain the peasant of his profit and keep him in his economically dependent state. This social structure bias would also foster organizational alternatives like cooperatives and community enterprises. The assumption underlying such processes is that there exists power in both numbers and volume and that the peasant must unite in order to increase his capacity to carry out business transactions and increase his power and profit. One of the major social-structural differences between the liberationists and the developmentalists appears to rest with the autonomy due the community in rectifying these dependency conditions. For the development advocates, it means more effective participation in the national and international capitalistic marketplace, while for the liberationists, it means the establishment of a self-sufficient production and consumption system with independence from capitalist influences.

The second development project bias as I see it rests with technology. Here I would include not only the obvious raw materials for producing a product and the skills and tools for accomplishing the process but also the credit which enables activity initiation and expansion. The typical agricultural assistance project is designed to assist the rural farmer with the supplies, equipment, and skills in terms of technology and the local development bank or rotating credit fund is designed to finance his risk taking. An example of the differences between the liberation and development advocates here can be seen in the former's concentration on labor intensive practices as opposed to the latter's emphasis on capital intensive technology.

The third development bias rests with motivation and information. In terms of motivation, many development project planners begin by assuming that peasants are unmotivated, fatalistic, and traditional, and that their attitudes toward work and life must be changed in order that they will accept innovation and opt for the most beneficial alternative in terms of their own and the nation's economy. Conversely, the developmentalists might see the basic problem as one of ignorance for which a literacy, skills training, or adult education program is required. The liberationists, on the other hand, reject such "banking" approaches to education and are more inclined to adopt consciousness-raising techniques based upon a greater respect for the individual and his existing knowledge and attitudes.

I believe that each of these three approaches is directed to only a partial aspect of the rural farmer's plight. By emphasizing cooperatives without providing organizational and administrative skills, by fostering the adoption of new seeds and fertilizers without attending to intermediaries and the demand in the marketplace, by providing literacy training when there is little to read and no reason to write, [these approaches] are all partial answers to social change objectives.

By making these statements, I am leading to a conclusion that many have known and others have hypothesized for some time. Education, when used as the primary mode for promoting change, is weak and generally ineffective. One of many examples of the isolated effects of extension education in the change process comes from George C. Lodge's book, *Engines of Change:*

> ... in one Latin American country, a highly trained agricultural technician sent from the United States, a seed specialist, was there to assist a *campesino* with his tomato crop. The campesino was reluctant at first to use the fertilizer and seed offered by the technician because the farmer, operating on the margin of existence, viewed any change as a dangerous risk. Finally, he cooperated, however, and as a result his crop was bigger and better than before. But the rains washed out the road to his farm so that many of the tomatoes rotted in the field because the truck to take them away could not get through. When it arrived, it was, of course, the same truck as before, owned by the same local interests who controlled all the transport in the region. The market system was also the same as before, with the result that the actual return to the farmer was not appreciably different. When the visiting expert suggested that the farmer continue on his own the following year, purchasing fertilizer and better seed, the farmer's face went blank. The credit system, unchanged by the expert's visit, precluded obtaining funds for such purchases. The expert departed, leaving the farmer more convinced than ever that change was a dangerous thing.[6]

I believe the example demonstrates that an emphasis on education in the presence of social organizational or technological obstacles is seldom powerful enough to alter the status quo.

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[6] George C. Lodge, *Engines of Change, United States Interests and Revolution in Latin America*, New York: Knopf, 1970, p. 134.

The research in the last several years appears to substantiate this point of view. Let me turn to this evidence by citing some recent conclusions which support the general observation that any single channel intervention in the change process, whether it be educational, social organizational or technological in orientation, is inadequate given an interdependent reality.

On consciousness raising and literacy programs, Robert White comments on his evaluation of the Honduran Radio School Movement:

> The limitations of the radio schools seem to stem in great part from the emphasis on voluntarism, the attitude that if the individual tries to change himself and his environment, he can do so. This activism is directed against the traditional fatalism of the campesino. But there also has to be support in the environment, that is, from many different agencies which provide resources with which the increased motivation can work and accompany structural changes. The campesino cannot do it all by himself no matter how hard he tries, and to lead him to think he can is too frustrating. For example, many campesinos have learned to read and write, but they have nothing to read; they have learned a bit about agriculture, but they have not been able to put any of it into practice; something has been learned about health and homemaking, but as one woman said, "They have suggested that we make room divisions out of cloth when we don't have cloth for clothes."[7]

Ronald Watts, writing in the *World Year Book of Education, 1973*, on education and agriculture, states:

> Education has had a negative influence where it has been applied in isolation.... The world abounds with agricultural programmes started without a secure market for the product being promoted. Farmers are taught the techniques but are frustrated when they cannot sell what they produce.[8]

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[7] Robert A. White, "An Evaluation of the Radio Schools and the Radio School Movement in Honduras (Summary Report)," St. Louis: St. Louis Univ., Dept. of Sociology & Anthropology, March 1972, pp. 131-132 (mimeo).

[8] Ronald E. Watts, "The Educational Needs of Farmers in Developing Countries," in Foster and Sheffield, *Education and Rural Development, The World Year Book of Education 1974*, London: Evans Bros. Ltd., 1973, p. 151.

From a UNESCO report on population education at Bucharest, Romania, in 1974:

> . . . programmes of educational renovation, in order to meet the population challenge, should form part of integrated development programmes. Attempts at bringing about rational and responsible reproductive behavior through, for instance, the introduction of population education, will probably not achieve the desired results where the economic situation remains backward and where social structures and cultural norms fail to stimulate change and progress.[9]

Robert Hornik, and others, writing on the mass media in rural areas, in 1973:

> To the planners' dismay, early experiences with the mass media in rural education revealed that rural people preferred popular music to new agricultural programmes and soap operas to health information. It was discovered that simply reaching rural audiences with information was not in itself a sufficient means to foster social change.[10]

From the Economic Commission on Latin America in 1968 on community development programs:

> The Latin American experience in community development training has not been altogether satisfactory to the countries or to the international agencies. CREFAL found that its work over some fourteen years demonstrated that the differing situations of the countries would not admit of a single generalized treatment. . . . As a result, the community development approach which had been conceived as universally effective should be regarded as a method of action to assure popular participation and its coordination with efforts of the public sector, rather than as autonomous programmes with intersectoral objectives.[11]

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[9] UNESCO, "Population and Education," Presented at World Population Conference, Bucharest, 19 August 1974, pp. 12-13.

[10] Robert Hornik, John K. Mayo and Emile G. McAnany, "The Mass Media in Rural Education," in Foster and Sheffield (eds.) *Education and Rural Development, The World Year Book of Education 1974*, London: Evans Bros. Ltd., 1973, p. 72.

[11] "Integral Local Development Programmes in Latin America," *Economic Bull. for Latin America*, 13: 2, p. 74, November 1968.

Orlando Fals Borda, from his 1971 monograph reporting on a UN evaluation of cooperatives in three Latin American countries:

> It can be expected that rural cooperatives of the credit and entrepreneurial types may continue functioning for many more years as they have functioned until the present, as safe symbols of social reform, adjusting themselves to the dominant milieu, promoting marginal changes, and helping to "develop" the countries without tampering with the foundation of the prevailing socio-economic system.[12]

Finally, Raul Prebish in 1971:

> The acceleration of development demands sweeping changes in structures and in mental attitudes. They are essential if technical progress is to be assimilated, its advantages turned to account, its contradictions resolved, and its adverse effects counteracted; and essential also for the promotion of social mobility, both for its own sake and because it too is one of the indispensable requirements of technological progress. Social mobility is not merely a matter of general education and technical training; it is a basic question of structure.[13]

These quotes, which I feel are representative of the literature on micro social change, bring several observations to mind. If it is correct that both liberationists and developmentalists must turn their attention to integrated social change efforts and education is generally weak and ineffectual when used alone, what is the role of education? If attention is directed in a holistic way to each of the areas of social organization, technology, and information and motivation, I believe out-of-school or nonformal education has considerable to offer; outside of this approach, however, I see it making little contribution. I envision nonformal educators as curricular and instructional or change strategy specialists who would work in agriculture and health projects rather than in so-called adult education or literacy agencies. There would be no mention of an education project per se since education, I believe, should be viewed as a process which links individuals with their environment rather than as an objective in and of itself. In the so-called "less developed" countries, resources are too scarce and the problems too immense for agencies to support, for example, literacy projects simply because urban decision-makers find such projects politically appealing or because they view literacy as a prerequisite to other learning. This does not mean I am opposed to literacy as a component in a wider program where learning to read or write has some immediate application to the problems at hand. Education, therefore, as a process, must have some content area like agriculture or health to relate to and which enables individuals to manipulate their environment in new ways.

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[12] Orlando Fals Borda, "Cooperative and Rural Development in Latin America, An Analytic Report," Vol. III, *Rural Institutions and Planned Change*, Report No. 71.1, U.N. Research Institute for Social Development, Geneva, 1971, p. 145.

[13] Raúl Prebish, *Change and Development Latin-America's Great Task*, New York: Praeger, 1971, p. 12.

At this point, I have outlined the two competing points of view known as dependency-liberation and deprivation-development, along with some of their respective program implications. The next question is, can liberation and development oriented programs merge in any important and substantive ways? The answer, I believe, is Yes from the standpoint of what the developmentalists can learn from the liberationists, and No from the standpoint of what the liberationists can learn from the developmentalists. The liberationists, for example, have reminded us to attend to autonomy, participation, the importance of the social, economic and political structures, and to question the capitalistic orientation of many programs which inevitably increase an individual's dependency rather than liberate him from such constraints. In addition, the liberationists have created several approaches to group process which, in terms of technique, may be applicable to enlightened development oriented programs. Liberationists, I believe, can be taught little from the point of view of the developmentalists. The primary reason for this conclusion rests with the nature of the objectives of the two approaches. While dependency theorists are more likely to emphasize affective and structural outcomes like liberation, the deprivationists are more eclectic and tend toward quantitative outcomes like production and income. Clearly, the dependency theorists are intent on providing an alternative rather than a supplemental explanation of underdevelopment. As Denis Goulet has stated: "*At stake, therefore, is something more than a world of words; the battle lines are drawn between two conflicting* *interpretations of historical reality, two competing principles of social organization*. The first values efficiency and social control above all else, the second social justice and the creation of a new man."[14]

Comment

I recently had the opportunity of commenting on Charles Lyons' paper on non-formal education in Africa which was presented to Syracuse University's Program of Eastern African Studies Spring Seminar. Lyons' paper has a great deal in common with La Belle's. Both scholars make the essential but often neglected point that "formal" and "non-formal" refer, at best, to different modes of education, not to different entities. Lyons, however, makes the additional point that, too often, informal (and non-formal) education is advocated by members of elites as a panacea for members of the "masses."

It is Lyons' latter point that is most appealing, I believe, to anthropologists, and is missed in La Belle's paper. Since La Belle is explicitly conscious of the relationship between education and development, his lack of attention to the possibilities of exploitation in institutionalized non-formal education is surprising. Indeed, he comes close to discussing that possibility a number of times and his recognition of the need to restructure society in order to increase educational benefits shows his keen awareness of educational reality.

Because of La Belle's obvious awareness of educational realities, it is surprising that he has neglected Inkeles' (for example, 1969) work bearing on the educational functions of the institutions of modernization. While he does discuss the educational role of many of these institutions, he tends to do so nontheoretically. Indeed, if he had taken Inkeles' studies into account, he would not so readily agree with Lodge's assertion that education is ineffective in promoting change. Of course, structural changes are necessary but it is possible to speed these changes through education (understood broadly). In fact, as Inkeles demonstrates, formal education enables people to make most efficient use of non-formal education (for example, in factories). And La Belle does come close to saying so in his conclusion to the discussion on liberation and development products and their areas of commonality.

Finally, it is hard to be against what La Belle is for. Certainly a holistic attack on deprivation is called for. Certainly, education should be part of a full-scale developmental program. (Of course, there are those of us who would refuse to separate education so easily from other institutions.) Certainly, oppressive institutions need change.

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[14] Goulet, *op. cit.*, p. 8.

What disturbs me, however, is the lack of hard evidence offered in La Belle's evaluation of various approaches resulting from the dependency-liberation and dependency-development "theories" (really "models") of education and their corollaries. Indeed, only anecdotal descriptions are offered as data. No quantitative data, no statistical tests, are offered. In fact, there are no qualitative demonstrations such as one would expect in controlled comparisons. While these are suggestive, they are far from conclusive. What is more regrettable is that La Belle's presentation, a very important one, is weakened thereby. One would like to see a more rigorous testing of the hypotheses implicit in the theories (models) he discusses.

Frank A. Salamone
St. John's University

References

Inkeles, A. "Making Men Modern: On the Causes and Consequences of Individual Change in Six Developing Countries." 75:2 *Amer. J. of Sociology* 208, 1969.

Lyons, C. "Cabinet Ministers or Cabinet Makers? A Critical View of 'Nonformal' Education for the African." Presented for the Lecture Series, The Program in Eastern African Studies, Syracuse University NY, 18 April 1975, (unpublished).

APPENDIX A

Abbreviated Conference Program

September 26-29, 1976

WELCOMING TALKS

Lawrence L. Boger, Provost

Keith Goldhammer, Dean, College of Education

Homer Higbee, Assistant Dean, Center for International Studies and Programs

Policies and Programs in Nonformal Education: Views of Two Major Funding Agencies

August Schumacher, Senior Rural Development Economist, *The World Bank's Rural Development Policies*

Curtis Farrar, Assistant Administrator for Technical Assistance, Agency for International Development

Duncan Ballantine, Director, Education Department, World Bank

Project Descriptions

Heliodoro Diaz-Cisneros, Director, *The Puebla Project, Mexico*

Sayed Rahim, Former Director of Research, *Comilla Project, Bangladesh*

Betru Gebregziabher, Chief Technical Advisor, Ministry of Agriculture and Settlement, Ethiopia

Alberto Pradilla, Director, *The Candeleria Project, Colombia*

Margot Higgins, Former Nutrition Advisor to CARE, *The Poshak Project, India*

Sea Baick Lee, School of Public Health, University of Michigan, *The Mother's Club Program in Korea*

T. A. Koshy, Indian Council for Social Development, *Literacy Education in Development*

Edgardo Rothkegel, University of Massachusetts: *Rural Education, Ecuador*

Edgar, G. Nesman, University of South Florida, Co-Director, *Basic Village Education Project, Guatemala*

Patrick Van Rensberg: *The Botswana Brigade, An Alternative Non-Formal Educational Program for Secondary School Rejects*

Followed by discussion sessions for each of the above projects

PANELS: Plenary Sessions

Graphic Media for NFE: Panel and demonstrations from experience

James L. Page, Director, Instructional Resources Center, College of Education, Michigan State University, Chairman

Panelists:

Royal D. Colle, Department of Communication Arts, Cornell University

Catherine D. Crone, World Education

Jonathan F. Gunter, Information Center on Instructional Technology, Washington, D.C.

Frank Hlob, Instructional Development and Technology, Michigan State University.

Wilfred Veenendaal, Instructional Media Center, Michigan State University

Improving the Performance of Non-Formal Educators

Manfred Thullen, Department of Resource Development, College of Agriculture and Natural Resources, Michigan State University, Chairman

Panelists:

Heliodoro Diaz-Cisneros, *Director, The Puebla Project, Mexico*

Alberto Pradilla, *Director, The Candeleria Project, Colombia*

Francis Byrnes, *Director, Training, Research, Communication, International Agriculture Development Service*

LUNCHEON DISCUSSIONS

Small table luncheon sessions were held with resource persons and other participants.

MOTION PICTURES SHOWN

"Seeds of Progress"

For further information on this film, contact the Chief of the Rural Development Division of the IBRD, 1818 H Street, N.W., Washington, D.C. 20433.

"If One Today, Two Tomorrow"

For further information on this film, contact Clifford Block, TA/EHR, Agency for International Development, Washington, D.C. 20523.

"Images of Life" and "Survival"

For further information on these films, contact James Chandler, Bureau of Technical Assistance, Room 4677, New State Building, Agency for International Development, Washington, D.C. 20523.

"Communication Strategy for Development" (British film)
Available from Paul Schupbach, National Instructional TV Library, Box 80669, Lincoln, NB 68501.

"China's Barefoot Doctors"
Available for rental from Diane Li Productions, P. O. Box 2110, Stanford, CA 94305.

"The Smile of Pa-Noi: Midwife Training Program—Thailand"
Available from the International Development Research Centre, Box 8500, Ottawa, Canada K1G 3H9.

WORKSHOP (September 29-October 3)

Participants in workshops which followed the conference were all from foreign countries. The workshop programs consisted of plenary sessions and four work groups which produced separate reports of their findings.

EXHIBIT

An exhibit of over 250 articles, books and other materials on Non-Formal Education was set up for the participants. A number of items provided by several agencies and organizations were made available free of charge to interested participants.

APPENDIX B

Registered Participants in Conference/Workshop

Mr. Augusto Aguilar*
National Director of Adult
Non-Formal Education
Ministry of Education
Reparto Miralvalle
Calle Estocolmo 307
San Salvador, EL SALVADOR, C.A.

Mr. Badaruddin Ahmed
Graduate Student
Department of Rural Sociology
Cornell University
Ithaca, NY 14853

Mr. Hugo Alborta*
National Director
Council for Administrative
Rationalization
Casilla #2635
La Paz, BOLIVIA

Mr. Benjamin Alvarez*
Projects Director
CEDEN
Apartado Aereo 4354
Bogota, COLOMBIA

Mr. Chuda Nath Aryal
Dept. of Curriculum, Instruction & Media
Southern Illinois University
Carbondale, IL 62901

Dr. Njoku E. Awa*
Assistant Professor
Dept. of Communication Arts
514 Mann Hall
Cornell University
Ithaca, NY 14853

Mr. Memon Abdul Aziz*
Assistant Educational Advisor
Ministry of Education, Pakistan
1643 G Spartan Village
East Lansing, MI 48823

Prof. Ranjit Singh Bajwa
Department of Education
Eastern Michigan University
Ypsilanti, MI 48197

Dr. Duncan Ballantine
Director
Education Projects Department
World Bank
1818 H Street, NW
Washington, D.C. 20433

Ms. Ligaya G. Bautista
Research & Publications Center
Philippines Christian College
P.O. Box 907
Manila, PHILIPPINES 2801

Mr. Patrick Bennett
Senior Education Officer
Watermount P.O.
St. Catherine, JAMAICA, W.I.

Ms. Rachel V. Bigay
Graduate Student
333 [illegible] House
Stanford, CA 94305

Ms. Duangduen Bisalputra*
Chairman of Non-Formal Education
Project
National Council of Women
in Thailand
Faculty of Education
Chulalongkorn University
Phayathai Road
Bangkok, THAILAND

---

*Workshop participants

Ms. Elizabeth Boos
Friends School
Sandy Spring, MD

Mr. Newton R. Bowles
Deputy Executive Director
of Programs
UNICEF
United Nation's Children's Fund
United Nations, NY 10017

Mr. Peter Boynton
Project Associate
Academy for Educational
Development, Inc.
1414 Twenty-Second Street, N.W.
Washington, D.C. 20037

Dr. Wayne G. Bragg
Director
Hunger Program
Wheaton College
Wheaton, IL 60187

Mr. Giovanni Brito*
Assistant Director of Agriculture
& Training
CNIECA
San Cristobal
DOMINICAN REPUBLIC

Mr. Francisco Buitrago*
Oficina de Curriculum
Ministerio de Educacion Publica
Managua, NICARAGUA

Mr. Francis Byrnes*
Director of Training/Research/
Communication
International Agricultural
Development Service
1133 Avenue of the Americas
New York, NY 10036

Mr. Jaime A. *Carrera* Cruz*
Coordinador Agricola Educacion
Basica Rural
2Av. 8-53 zona
Guatemala, GUATEMALA, C.A.

Mr. James Chandler
Associate Assistant Administrator
AID/Department of State
Washington, D.C. 20523

Mr. Vielka Chang-Yau*
Chief
Department of Communication
Instituto de Investigacion
Agropecuaria de Panama
Apartado 48
Santiago, Veraguas
Republic de PANAMA

Prof. Royal D. Colle
Graduate Teaching & Research
Center
Dept. of Communication Arts
Cornell University
640 Stewart Ave.
Ithaca, NY 14850

Dr. Nat Colletta
Faculty of Educational Studies
State University College at
Buffalo
1300 Elmwood Avenue
Buffalo, NY 14222

Dr. J. Lin Compton
Adult and Community College
Education Department
North Carolina State University
Raleigh, North Carolina 27607

Mr. George V. Corinaldi*
Education Officer
USAID/American Embassy
P.O. Box 1014
Addis Ababa, ETHIOPIA

Mr. Heriberto Coronel*
Education Projects Specialist
AID/Paraguay
1 790 Asuncion, PARAGUAY

Ms. Catherine Crone
Director, Department of Program
Development & Evaluation

World Education
1414 Sixth Avenue
New York, NY 10019

Mr. Heliodoro Diaz-C.*
Director de Prondaaj
Colegio de Postgraduados
(Direccion)
Chapingo, Mexico
MEXICO

Dr. James A. Draper
Dept. of Adult Education
O.I.S.E.
252 Bloor St. West
Toronto, Ontario
CANADA M5S 1V6

Mr. Eduardo Espinel R.*
Director
Servicio Nacional de
Aprendizaje (SENA)
10 Piso Ed. Beneficencia
Villavicencio, COLOMBIA

Mr. Curtis Farrar
Deputy Assistant Administrator
AA/TA
AID/Department of State
Washington, D.C. 20202

Dr. Donald Ferguson*
AFR/DS
AID/Department of State
Washington, D.C. 20523

Mr. Betru Gebregziabher*
Head
Extension, Education and
Cooperative Promotion
Department
Arsi Rural Development Unit
P.O. Box 3375
Addis Ababa, ETHIOPIA

Rev. Walter George
Latin American Coordinator
Codel, Inc.
79 Madison Ave.
New York, NY 10016

Mr. Jock Gunter
Director
Information Center on
Instructional Technology
Academy for Educational
Development, Inc.
1414 22nd Street, N.W.
Washington, D.C. 20037

Dr. Scott Hammond
Far East/Tech. NS
AID/Department of State
Washington, D.C. 20523

Mr. John P. Hannah
Director, Planning and Programming
Overseas Education Fund of
the League of Women Voters
2101 L Street, N.W.
Suite 916
Washington, D.C. 20037

Mr. Andra James Herriott*
Education Advisor
c/o U.S. Embassy
Guatemala City, GUATEMALA

Mr. Barry Heyman
Human Resources Officer
Department of State–Lima (ID)
Washington, D.C. 20520

Ms. Margot Higgins
106 Third Street, N.E.
Washington, D.C. 20002

Ms. Arlene Hoffman
O.I.S.E.
Department of Sociology in
Education
252 Bloor Street West
Toronto, Ontatrio
CANADA

Dr. Donald E. Hoke
Executive Director
Wheaton College
Billy Graham Center
Wheaton, Illinois 60187

Mr. James Hoxeng*
TA/EHR
AID/Department of State
Washington, D.C. 20523

Mr. Glen O. Hylton*
Continuing Education Coordinator
Ministry of Education
2 National Heroes Circle
Kingston, JAMAICA

Mr. Sixto R. Inchausteguir*
Director De Relaciones Publicas De
La Secretaria De Salud Publica y
Asistencia Social
Santo Domingo
DOMINICAN REPUBLIC

Mr. Stephen Jacobson
Capital Development Officer
USAID/Bolivia, A.P.O.
New York, NY 09867

Mr. Abdul Karim*
Rector IKIP
Jl. Bontosunggu 17
Ujung Pandang, INDONESIA

Mr. Abdul Jaleel Zazi
U. Box 6075
Florida State University
Tallahassee, Florida 32313
(Professor, People's Open
University, Islamabad, Pakistan)

Mr. Thomas B. Keehn
President, World Education
1414 Sixth Avenue
New York, NY 10019

Dr. Dave Kline
Director
Center for Studies in
Education & Development
Graduate School of Education
Harvard University
Cambridge, Massachusetts 02138

Dr. T. A. Koshy*
Project Director
Non-formal Education Project
Council for Social Development
New Delhi-3, INDIA

Ms. Sue Kramer
Medical Assistance Program
Box 50
Wheaton, Illinois 60187

Mr. Kopr Kritayakirana*
SEAMES
920 Sukhumwit Road
Bangkok, 11, THAILAND

Dr. Anthony R. Lanza*
Chief Education Officer
USAID/American Embassy Kabul
Department of State
Washington, D.C. 20523

Mr. Leo Laufer
PPC/IA/UN
AID/Department of State
Washington, D.C. 20523

Mr. Kye Woo Lee*
Economist
World Bank
1818 H St. N.W.
Washington, D.C. 20433

Mr. Sea Baick Lee
536 S. Forest Street,
Apt. 15F
Ann Arbor, MI 48104

Mr. Victor Levine
Adjunct Research Economist
Educational Testing Service
110 Morningside Drive #8
New York, NY 10027

Dr. John Lipkin
Professor of Education
Faculty of Education
McGill University
Montreal, Quebec
CANADA

Mr. Gilberto Mendez*
Project Coordinator
USAID--Education
APO New York, NY 09889

Ms. Eva Meyer
Nutrition Advisor
USAID/Santo Domingo
APO New York, NY 09889

Ms. Joyce Moock
ETS Adjunct Anthropologist
106 Morningside Dr.
New York, NY 10027

Mrs. Doris F. Moore
Nutritionist
Office of Nutrition
Technical Assistance Bureau
515 22nd Street N.W.
Washington, D.C. 20523

Mr. Carlos Morales*
Education Section
National Planning Council
Arco 4-7 #69
Jardines de la Asuncion,
Zona 5
Guatemala, GUATEMALA, C.A.

Mr. Edgar Nesman
Co-director
Basic Village Education
Project
AID
University of S. Florida
Tampa, Florida 33620

Dr. Burt Newbry
Human Resources Division
USAID
American Embassy
Kathmandu, NEPAL

Mr. Rifat Okabol*
Turkey/MSU
911 I Cherry Lane

Mr. Claudio Olivares*
General Secretary
Coordination Secretariat of
Non-Formal Education
13 Calle 4-08 Zona 11
Guatemala, GUATEMALA, C.A.

Ms. Ellen Ostrom
Medical Assistance Program,
International
Box 50
Wheaton, Illinois 60187

Mr. Jerry O'Sullivan-Ryan*
Non-Formal Education Specialist
11 AV 10-67A, Zona 10
Guatemala, GUATEMALA, C.A.

Ms. Evelyn Otalora
Comunicador Social
Calle 87 #22-31 Apt. 102
Bogota, COLOMBIA, S.A.

Mr. Basilio Jalon Ottey*
Advisor to the Ministry of
Education
USAID/Panama
P.O. Box J
Canal Zone, PANAMA

Mr. Leonard H. Otto
TA/AGR
AID/Department of State
Washington, D.C. 27926

Mr. Edgar Owens
TARD 200 SA2
AID/Department of State
Washington, D.C.

Mr. Luis Paez
Chief, Data Processing
Department
Colombia Institute for the
Promotion of Higher
Education
Bogota, COLOMBIA, S.A.

Mr. Luis M. Palacios V.
Sub-Director de Produccion
Ciclo Basico de Chilibre
Panama, Zona 18
Republic of PANAMA

Ms. Mabel Palacios*
Ministerio de Educacion
Lazoro de Rivera 858
Asuncion, PARAGUAY

Prof. Ignacio Paravicini Ruiz*
Coordinador Nacional Educacion
Rural
c/o USAID/Human Resources
Division
La Paz, BOLIVIA

Mr. Rolando Peres
Technical Assistant
Calles #102
Santo Domingo
DOMINICAN REPUBLIC

Dr. Alberto Pradilla
Director
Candelaria Project
Fundacion Parla Educacion
Apartado Aereo 2805
Cali, COLOMBIA, S.A.

Mr. Douglas Procunier
Mott Foundation
Rm. 510 Mott Bldg.
Flint, MI 48502

Mr. Kalim Quamar
136 E. Brittany Manor
Amherst, Massachusetts 02001

Dr. David Radcliffe
Faculty of Education
University of Western Ontario
London, Ontario
CANADA N6G 1G7

Dr. Slamet Raharjo*
Head, Regional Education Office
165D Let. Jen. S. Parman Street
Indramayu, West Java
INDONESIA

Mr. Noorgul Raheemi*
Vice President of Adult Education
2 Block Microyon
Kabul, AFGHANISTAN

Dr. Syed A. Rahim*
The East-West Communication
Institute
1777 East-West Rd.
Honolulu, Hawaii 96822

Dr. B. Ramakrishna*
Adviser
Fundacion para el Desarrollo de
la Region Centro Occidental
de Venezuela
Apartado Postal 523
Barquisimeto, VENEZUELA

Mr. Fernando Ramirez
Non-Traditional Education Officer
Colombian Institute for the
Promotion of Higher Education
Bogota, COLOMBIA, S.A.

Mr. Benigno Rangel*
Supervisor de Educacion Basica
General
Ministerio de Educacion
Fuente del Chase
Casa #15-A
La Chorrera, PANAMA, C.A.

Dr. Charles H. Reed*
Human Resources Division
USAID/Bolivia
APO New York, NY 09867

Mr. George Reimer*
Mennonite Central Committee
Apartado 1779
Guatemala City, GUATEMALA, C.A.

Mr. Barry Rigby
International Association
of Schools
345 E. 46th St.
New York, NY 10017

Mr. John Robinson
Medical Assistance Program,
International
Box 50
Wheaton, Illinois 60187

Dr. Edgardo Rothkegel
Campus Coordinator, Ecuador
Project
Center for International Education
Hills House South
University of Massachusetts
Amherst, MA 01002

Mr. Oswaldo Saavedra Ballesteros
Chief of Budget Coordination
Section
Colombia Institute for the
Promotion of Higher Education
Bogota, COLOMBIA, S.A.

Dr. Mohan Man Sainju*
Member
National Planning Commission
Ramshah Path
Kathmandu, NEPAL

Mr. August Schumacher
World Bank
1818 H Street NW
Washington, D.C. 20433

Dr. James Shute
University of Guelph
Guelph, Ontario
CANADA

Mr. Steven Silha
Mott Foundation
510 Mott Bldg.
Flint, MI 48502

Mr. Juan Andres Silva
Director de Recursos Humanos
EE. VV. Yamambay
Asuncion, PARAGUAY

Mr. James Smith
LA/DR
AID/Department of State
Washington, D.C. 20523

Mr. Soemardi*
Director
Non-Formal Education Project
Office of Educational
Development (BP3K)
Ministry of Education
Jalan Menteng Raya 23
Jakarta, INDONESIA

Mrs. Liceria B. Soriano*
Director, SEAMEO Regional Center
for Educational Innovation
and Technology
Arroceros St.
Manila, PHILIPPINES

Dr. Seth Spaulding
International & Development
Education Program
College of Education
University of Pittsburgh
Pittsburgh, Pennsylvania 15260

Sister Anne Marie Speyer
Secretary General
Movement of Basic Education
R. Sao Clemente, 385
Rio De Janeiro 20.000
BRAZIL

Dr. John Summerskill
Vice President
Educational Testing Service
Princeton, N.J. 08540

Dr. Mohammad Romli Suparman
Office of Education Development
Department of Education and
Culture
Jalan Menteng Raya 23
Jakarta, INDONESIA
(currently on MSU campus as a
graduate student)

Ms. Melke Tadesse*
Education & Health Office
USAID/Ethiopia
APO New York, NY 09319

Ms. Karen Tompkins, R.N.
Lutheran Church in America
Director, Community Health
Department, Liberia
899 White Oak Lane
Park Forest South, IL 60466

Mr. Alex Tosh
Regional Director
Basic Education for Eastern Africa
UNESCO/UNICEF Field Office
P.O. Box 30592
Nairobi, KE[illegible]A

Dr. Robert Van Duyn
TA/EHR
AID/Department of State
Washington, D.C. 20523

Mr. Patrick Van Rensburg
Box 121
Serowe
BOTSWANA

Mr. P. Jose de Vasconcellos
Director of International Affairs
Movement for Basic Education
(MEB)
Rua Sao Clemente 385
Rio de Janeiro, BRAZIL

Dr. Myron Vent*
TA/EHR
AID/Department of State
Washington, D.C. 20523

Mr. Harihar Prasad Verma*
Regional Education Director
Eastern Education Region
Dharan, NEPAL

Ms. Orapin Viboolyaphand*
Archarn
Faculty of Education
Chulalongkorn University
Bangkok, THAILAND

Mr. John M. Villaume
Research Assistant
Graduate Student
C.S.E.D. Harvard Graduate
School of Education
Cambridge, MA 02138

Mr. John Warren*
USAID/AGR
U.S. Embassy
Santo Domingo
DOMINICAN REPUBLIC

Mr. Jakob Weber*
Dipl. Ing. Agriculture
53 Bonn
Gudenauerweg 128
WEST GERMANY

Mr. Paul Wenger
Capital Development Officer
USAID/Nicaragua
APO New York, NY 09885

Mr. Paul E. White*
Project Manager
Non-Formal Education Project
USAID/Box 7
Balboa, Canal Zone
PANAMA

Mr. Andrew Wisu
(Sudan)
Wheaton College
Box 575
Wheaton, Illinois 60187

Dr. Bernard Wilder*
TA/EHR
AID/Department of State
Washington, D.C. 20523

Mr. Gerald Winfield
PHA/POP/MI
AID/Department of State
Washington, D.C. 20523

MSU Faculty and Graduate Students Who Attended One or More Sessions

Keith Anderson
Charles Blackman
John Frank Bobbitt
Lawrence L. Boger
Ben Bohnhorst
Michael Borus
Cole Brembeck
Mary Bednick
Melvin Buschman
Denio Caul
Sheldon Cherney
Joan M. Claffey
Clinton Cobb
James Costar
Robert Craig
Robert Davis
Leland Dean
Eugene deBenko
Richard Featherstone
George Ferns

Jack Fuzak
Kathleen Graham
Marvin Grandstaff
Keith Goldhammer
Carl Gross
David K. Heenan
Cas Heilman
Howard Hickey
Homer Higbee
Walker Hill
Frank Hlob
Mary K. Hobbs
Iwao Ishino
Herbert Jackson
Henry Kennedy
Russell J. Kleis
Kathryn M. Kolasa
Maria Beatrize Luce
Harry McKinney
Lester Manderscheid

Gale Mikles
Geoffrey Moore
Robert Morris
Kenneth Neff
Linda J. Nelson
Donald Nickerson
James Page
Rex Ray
Robert Rentschler
Gene Rex
Harold Riley
Esther Schwedel
James Snoddy
Robert Thomas
Manfred Thullen
Ruth Hill Useem
Wilfred Veenendaal
Ted Ward
Yvonne Waskin
Stanley P. Wronski

APPENDIX C

Background of Conference Participants

At the time that invitations were being extended to attend the Conference and Workshop on Non-Formal Education and the Rural Poor, prospective participants were asked to provide information on their own professional backgrounds and to indicate the issues and problems that they felt were most important to discuss at the Conference/Workshop. Response was only partial, but the information received was helpful in constructing a profile of the participants.

A total of 40 participants provided at least some of the requested pre-registration information. Some of these data are summarized in Table 1 and Table 2, but they should be interpreted carefully because the percentages are based upon multiple responses. The totals of indicated percentages are not 100 percent, because both present and previous professional posi-

TABLE 1. Summary of Pre-Registration Data for 40 Participants–Current and Previous Professional Experience.[1]

	%	*Total* %
Governmental Agencies		38
High level	21	
Mid level	12	
Operatives	5	
Private Sector		58
Donor Agency		51
Administrative	23	
Professional & advisory	28	
Professional Advisor (independent)		14
International Organization		16
Academic		56
Administrative	19	
Professional	37	

Total number of respondents = 40

[1] Both present and previous professional positions were tabulated, in part because virtually all the participants reported their present positions to be administrative—information which did not adequately represent their background and experience.

TABLE 2. Summary of Participant Interest in Discussion Topics as Reflected in Pre-Registration Data. Percentage of Respondents Indicating Interest in the Given Topic.[1]

Administration and Planning	%
Planning and Program Design	39
Evaluation	27
Costs and Budget	8
Needs Assessment	19
Resource Assessment	4
Research	12
Management	8
Methods, Materials and Technology	
Models	12
Methods	19
Materials	23
Technology	5
Technical Support	4
Content	4
Concepts	12
Social and Interpersonal Action	
Social Attitudes	19
Awareness	5
Communications	35
Participation	19
Coordination	23
Motivation	4
Personnel Recruitment and Training	31
Miscellaneous	
NFE/Formal Education Linkages	12
Private vs. Government Control	4
Literacy-Related	12
Interest in Special Target Group	19

[1] Most respondents indicated more than one interest and the above percentages reflect the proportion of the total 40 respondents who indicated an interest in the indicated topic.

tions are included in Table 1, and in the case of Table 2, virtually all the 40 respondents indicated more than one area of interest. Therefore, the reader should understand that, for example, 39 percent of the 40 respondents indicated an interest in discussing planning and program design (Table 1). Similarly, 28 percent of the 40 respondents indicated they had had experience in a professional and/or advisory role working for a donor agency (Table 2).

The reason for including both present and previous work experience was the fact that more than 65 percent of the respondents reported their present position as being administrative. By including previous work experience, a more useful profile of the professional interests of the group was possible.

The information in Table 3 is based on the total population of participants rather than on a sample, and it enables the reader to sense the composition of the total participant group in terms of their sponsorship and their origins. There were 126 registered participants for the conference, not including Michigan State University staff and resource persons. Participants in the Workshop totaled 54, not including AID Staff who departed Lansing upon completion of the AID Caucus.

It may come as a surprise to some readers that almost 60 percent of the participants providing pre-registration information had professional experience in the private sector. On the other hand, the role of private organizations is well documented in the literature, and it is heartening to know that these pioneering organizations were adequately represented. The high percentage of persons with previous or present academic experience is similarly encouraging. Hopefully, it may reflect an interest on the part of formal educators to "bridge the gap" between these two complementary and developmentally important modes of educational delivery.

There are few surprises in the picture portrayed by Table 2, though there are certain "high interest" areas like "personnel," "communications" and "planning and program design" that did not receive as much attention as one might have expected when the Workshop organized itself into workgroups.

TABLE 3. Participants by Country of Origin and by Agency or Organization Represented.

		Total
Total Countries		26
Officially representing	13	
Defacto nationality	13	
National and International Agencies[1]		34
Governmental	4	
Private	23	
International donor	7	
Universities and Educational Institutions[2]		29

Total number of registered participants = 126

[1] **Not including the U.S. Agency for International Development.**
[2] **Not including Michigan State University**

APPENDIX D

Materials Exhibited and Distributed Free of Charge

by Michigan State University
Non-Formal Education Information Center
Joan Claffey, *Director*

Materials exhibited were organized under the following headings:

Non-Formal Education/Rural Development General	29 items
Case Studies	33 items
Agriculture/Rural Development	14 items
Health and Family Planning	19 items
Women and Development	12 items
Out-of-school Youth	5 items
Literacy	12 items
Communication and Media	25 items
Newsletters and Journals	58 items
Materials for free distribution	40 items

Bibliographies of the material exhibited are available upon request by writing to Joan Claffey, Non-Formal Education Information Center, 513 Erickson Hall, Michigan State University, East Lansing, Michigan 48824.

Publications of Studies in Non-Formal Education Michigan State University

1. Toward a Strategy of Interaction in Non-formal Education, George H. Axinn, 130 p., 1974.
2. Historical Perspectives on Non-formal Education, Marvin Grandstaff, 180 p., 1974.
3. Economics of Non-formal Education, John M. Hunter, Michael E. Borus, and Abdul Mannan, 193 p., 1974.
4. Non-formal Education in Ethiopia, Richard O. Niehoff and Bernard D. Wilder, 347 p., 1974.
5. Alternatives in Education: A Summary View of Research and Analysis on the Concept of Non-formal Education, Marvin Grandstaff, 82 p., 1974.

6. Case Studies in Non-formal Education, Russell Kelis, 430 p., 1974.
7. International Training Support for Non-formal Education, Kenneth Neff, 34 p., 1974. OUT OF PRINT
8. Effective Learning in Non-formal Education, Ted W. Ward and William A. Herzog, Jr., et al., 371 p., 1974.
9. NFE and an Expanded Conception of Development, Marvin Grandstaff, 49 p., 1973.
10. NFE: the Definitional Problem, Russell Kleis, C. Lang, J. Mietus, F. Tiapula, Ted Ward and J. Dettoni, 46 p., 1973.
11. NFE and the Structure of Culture, George Axinn, William Kieffer and Marvin Grandstaff, 46 p., 1973. OUT OF PRINT
12. NFE as an Alternative to Schooling, Cole Brembeck and Marvin Grandstaff, 51 p., 1973.
13. NFE in Ethiopia: Literacy Problems, Richard Niehoff and Bernard Wilder, 41 p., 1973.
14. NFE in Ethiopia: The Modern Sector, Richard Niehoff and Bernard Wilder, 41 p., 1973.
15. NFE: New Strategies for Developing an Old Resource: Conference Proceedings, Kenneth L. Neff, 36 p., 1974. OUT OF PRINT
16. Supplementary Paper No. 1: Alternatives for the Training of Skilled Industrial Labor in Sao Paulo, Brazil, Michael Lukomski, 96 p., 1975.
17. Supplementary Paper No. 2: Non-formal Education Approaches to Teaching Literacy, John Oxenham, 16 p., 1975.
18. Supplementary Paper No. 3: The Economic Aspects of Non-Formal Education, M.A. Mannon, 81 p., 1975. OUT OF PRINT
19. Supplementary Paper No. 4: Educational Alternatives in National Development Plans and Programs: Suggestions for Policy Makers, Harry L. Case and Richard O. Niehoff, 64 p., 1975.
20. Supplementary Paper No. 5: Non-Formal Education for Women in Bangladesh, Naseem Hoque.
21. Supplementary Paper No. 6: Women, Families and Non-Formal Learning Programs, Beatrice Paolucci, Margaret Bubolz, and Mary Rainey.
22. Supplementary Paper No. 7: Non-Formal Education and Rural Development, George H. Axinn.
23. The NFE Exchange (bimonthly newsletter).

TOPICAL ACQUISITIONS LIST

1. "Economics of Non-Formal Education," October 1975.
2. "Bibliographies of Non-Formal Education," November 1975.
3. "Non-Formal Education for Out-of-School Youth," April 1976.
4. "Non-Formal Education and the Role of Women and Families in Human Resource Development," July 1976.

APPENDIX E

Bio-Data on Principal Conference Resource Persons

DUNCAN BALLATINE has served as Director of the Education Department of the World Bank from 1962-76 and now serves the Bank as a consultant. Previous positions include a professorship in Economic History at the Massachusetts Institute of Technology, and the presidencies of Reed College and Robert College in Istanbul, Turkey.

FRANCIS C. BYRNES is Director of Training, Research and Communication for the International Agricultural Development Service. He had earlier spent thirteen years at the International Rice Research Institute (IRRI) in the Philippines, and the Centro Internacional de Agricultura Tropical (CIAT) in Colombia, primarily in training and communication activities in these two highly significant agricultural research and training centers.

ROYAL D. COLLE has served as Chairman of the Department of Radio and Television at Ithaca College and is now an Associate Professor at Cornell University. His main research interests are action oriented and are directed toward problems of communicating with low income and geographically isolated persons in such fields as rural development, health, nutrition, agriculture and family planning. He has served as a consultant to AID, World Bank and the Ford Foundation.

CATHERINE D. CRONE is the Director of Program and Evaluation for World Education. Her primary reponsibility is to supervise program analysis and evaluation activities of the organization, including nonformal education programs. Earlier in her experience she worked in the development of a community college program for minority groups and in basic adult education programs. She has also served as consultant for nonformal education projects in Pakistan and the Philippines.

HELIODORO DIAZ-CISNEROS is Director of Plan Puebla in Mexico and a member of the National College of Agriculture at Chapingo, Mexico. He is actively engaged in the training of key personnel of the vast PIDER agricultural and rural development project in Mexico.

CURTIS FARRAR has served as Assistant Administrator, Technical Assistance Bureau, Agency for International Development (AID) since 1975. Twelve previous years were also spent as an official of AID in planning and policy positions. From 1953-63 he represented the Asia Foundation in Cambodia and Pakistan.

BETRU GEBREGZIABHER, who now serves as Chief Technical Advisor to the Ministry of Agriculture and Settlement in Ethiopia, previously served for five years in key positions in the Chilalo Agricultural Development Unit (CADU) project. He had earlier served in the Ethopian Public Health College.

JONATHAN F. GUNTHER is Director of the Information Center on Technology of the Academy for Educational Development. He has been actively engaged in the design and production of educational equipment and materials for nonformal education programs in Ecuador, Colombia and the Dominican Republic.

MARGOT HIGGINS has served as a visiting Senior Fellow of the Food Institute, East-West Center; consultant and nutrition advisor to CARE, and nutrition consultant and food service director for several private organizations. She has lectured and made nutritional surveys and spent two years as a Peace Corps Volunteer in Turkey.

FRANK HIOB spent fifteen years as Director of the Publications and Broadcasts Department and Advisor to the Minister of Education in Papua, New Guinea. He is chairman of a UNESCO committee for the study of the flow of educational materials across political boundaries. He is currently a graduate student at Michigan State University in Instructional Development and Technology.

T. A. KOSHY now serves as Project Director of the Council for Social Development in New Delhi, India. Other highly relevant background experiences for his lecture on literacy include positions as Executive Director of the Literacy House at Lucknow, and Director, Department of Adult Education in the Ministry of Education and Social Welfare. Prior to these positions, he served as Professor of Biological Sciences and as Administrator of Extension and other positions at Allahabad Institute in India. He was recently awarded the Welthy Fisher Literacy Award by *World Education* for his work in the field of literacy.

SEA-BAICK LEE has served for several years as a health educator with a World Health Organization team on local health services; as a senior researcher in the Korean Institute of Family Planning and as Visiting Instructor, School of Public Health, Seoul National University. He is currently a candidate for the Ph.D. degree in Population Planning at the University of Michigan.

EDGAR G. NESMAN is the Project Co-Director for Research of the Basic Village Education Program in Guatemala, and is also a Professor of Sociology at the University of South Florida, which is responsible for evaluating the Guatemala Project. He has also served on family planning and educational projects in Honduras, Costa Rica and Cuba.

JAMES L. PAGE is Professor of Secondary Education and Curriculum and Director of the Instructional Resources Center, Michigan State University. His other professional experiences include directorship of an Adult Education Council, area coordinator for the Midwest Airborne Television program and as the Chief of an MSU audio-visual project in Brazil.

ALBERTO PRADILLA is Director of the Candelaria Project and Professor of Pediatrics at the University of Valle in Cali, Colombia. He has specialized in nutritional research and teaching in his own country, Colombia, and in other Latin American countries.

SYED A. RAHIM is a research associate at the East-West Communications Institute. He was formerly Chief of the Rural Institution Sector of the Bangladesh Planning Commission, which was preceded by fourteen years as Director of Research of the Academy for Rural Development at Comilla.

EDGARDO ROTHKEGEL-ORTUZAN serves as the Campus Coordinator for the Ecuador Project for the University of Massachusetts. He previously served as a member of the Board of the New England Farmworkers Council, as a community organizer for the Hampshire Community Action Commission, and as a teacher at the Catholic University at Valparaiso which also included work with students in rural community development. He has degrees in philosophy and theology at the Catholic Seminary in Santiago, Chile. He is currently a candidate for the D. Ed. degree at the University of Massachusetts.

AUGUST SCHUMACHER is senior Rural Development Economist and Mission Chief for appraisal and supervision of multi-sector agricultural and rural development projects in the Agricultural and Rural Development Department of the World Bank. He has served earlier as an economist in the Development Planning Unit and the Agricultural Economics and Livestock Divisions of the Bank.

MANFRED THULLEN is a member of the faculty of the Department of Resource Development of Michigan State University. He previously was employed as an Agricultural Extension Agent and as an Extension Specialist in Community and Area Development by the North Carolina State University. He was born in Ecuador and lived in various South and Central American and European countries.

PATRICK VAN RENSBURG is the founder and Director of the Serowe Brigades Program in Botswana, concerned with on-the-job technical training for rejects of a small secondary school system, by which trainees learn while they earn. His creative work is well described in a "Report from Swaneng Hill: Education and Employment in an African Country" published by the Dag Hammarskjold Foundation in Uppsala, Sweden.

WILFRED L. VEENENDAAL is Professor of Education and Director of Marketing for the Instructional Media Center of Michigan State University. He has served as consultant for the production of graphic and other educational materials to the Ministry of Education in Brazil, to the Academies for Rural Development in Pakistan and Bangladesh, International Schools in Belgium, and for a film series being produced by the Government of Iran.